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The Flabellum of Tournus

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ARCHAEOLOGICAL NOTES

TWO ATTIC BLACK-FIGURED LEKYTHOI IN BUFFALO

I. Lekythos of the Deianeira Group

A group of lekythoi with heavy egg-shaped bodies has been named the Deianeira Group after a lekythos in the British Museum with a scene representing Deianeira carried off by Nessos.[1] It is without shoulder, has a mouth with curved outline like a half-open flower and a thick drop ring under it to arrest drops of liquid. The date is 560–550 B.C. Payne and Haspels[2] have listed the examples of this group. It includes another vase in London and one in Berlin[3] with a running man between lions; one in Florence[4] with a woman between a lion and a panther; one in Taranto and one in the University Museum of Berlin with satyrs' heads. More often this type of lekythos is simply varnished black.[5]

The lekythos in the Albright Art Gallery of Buffalo[6] (fig. 1), mentioned by Payne and Haspels,[7] adds a most interesting and amusing subject to the rare series. A satyr with hairy body is galloping along on a mule in pursuit of a Maenad, who is running with such speed that her feet overlap the black band below the ground line. She will be caught in a moment, for the mule is biting her arm and will force her to stop. As far as I know, this motif is unique in Greek art. The rather awkward draftsman, who proves to have had a good imagination, may have gotten his idea from a grouping of horse, rider and running maenad, as we have it in a slightly later and much more carefully drawn picture on a vase of Lydos in the Metropolitan Museum of Art in New York.[8] Here the mule carrying the drunken Hephaistos cuts with his muzzle over the arm of a maenad dancing in the thiasos in front of him, but without biting. Thus, I believe that the Buffalo vase is the most original and amusing one of the Deianeira group.

II. Lekythos by the Athena Master

A white ground lekythos in Buffalo[9] (fig. 2 A, B) is mentioned by Haspels,[10] in the list of lekythoi from the developed stage of the Athena master. The description

[1] Walters, *Catalogue of Vases in the British Museum* ii, p. 57, B 30, pl. I.

[2] Payne, *Necrocorinthia*, pp. 191 ff. Older attributions to various styles, such as Corinthian, Laconian, Boeotian or Boeotian-Chalcidian, have been refuted by Payne; Haspels, *Attic Black-Figured Lekythoi*, 1936, pp. 1 ff. Cf. Beazley, *Attic Black-figure Vases*, ch. I, p. 61: the Deianeira group.

[3] London: 1931. 8–10. 1. Haspels, *op. cit.*, pl. I, 1; Berlin: Inv. No. 3764. Payne, *Necrocorinthia*, pl. 35,7.

[4] Libertini, *BdA.*, Series ii, vol. i, 1921–2, pp. 159 ff., figs. 1–2; Dugas, *RA.* 27–28, 1928, p. 61, fig. 8.

[5] Haspels, *op. cit.*, p. 4, lists 16 examples which are black all over.

[6] Mus. no. G 600. H., 12.2 inches = 0.31 m. Acquired from Hirsch, Geneva. White used for face, arms, legs of Maenad. I could not see the white dots around the rosettes mentioned by Payne.

[7] Payne, *Necrocorinthia*, p. 193; Haspels, *op. cit.*, p. 1, note 4; *Blue Book of the Buffalo Fine Arts Academy* 1931–1942, pp. 60 and 120, fig. b.

[8] Met. Mus. Acc. no. 31, 11.11. Gisela Richter, *BMMA.* xxvii, 1932, pp. 74 ff.; *MMS.* iv, 1933, pp. 169 ff., pl. 1, figs. 2–4.

[9] *Blue Book of the Buffalo Fine Arts Academy* 1931–1942, pp. 60 and 120, fig. a. Albright Art Gallery, no. G 479. H., 11.2 in. = 0.28 m. From Gela (Terranuova), in Sicily. Red on borders of dresses of Athena

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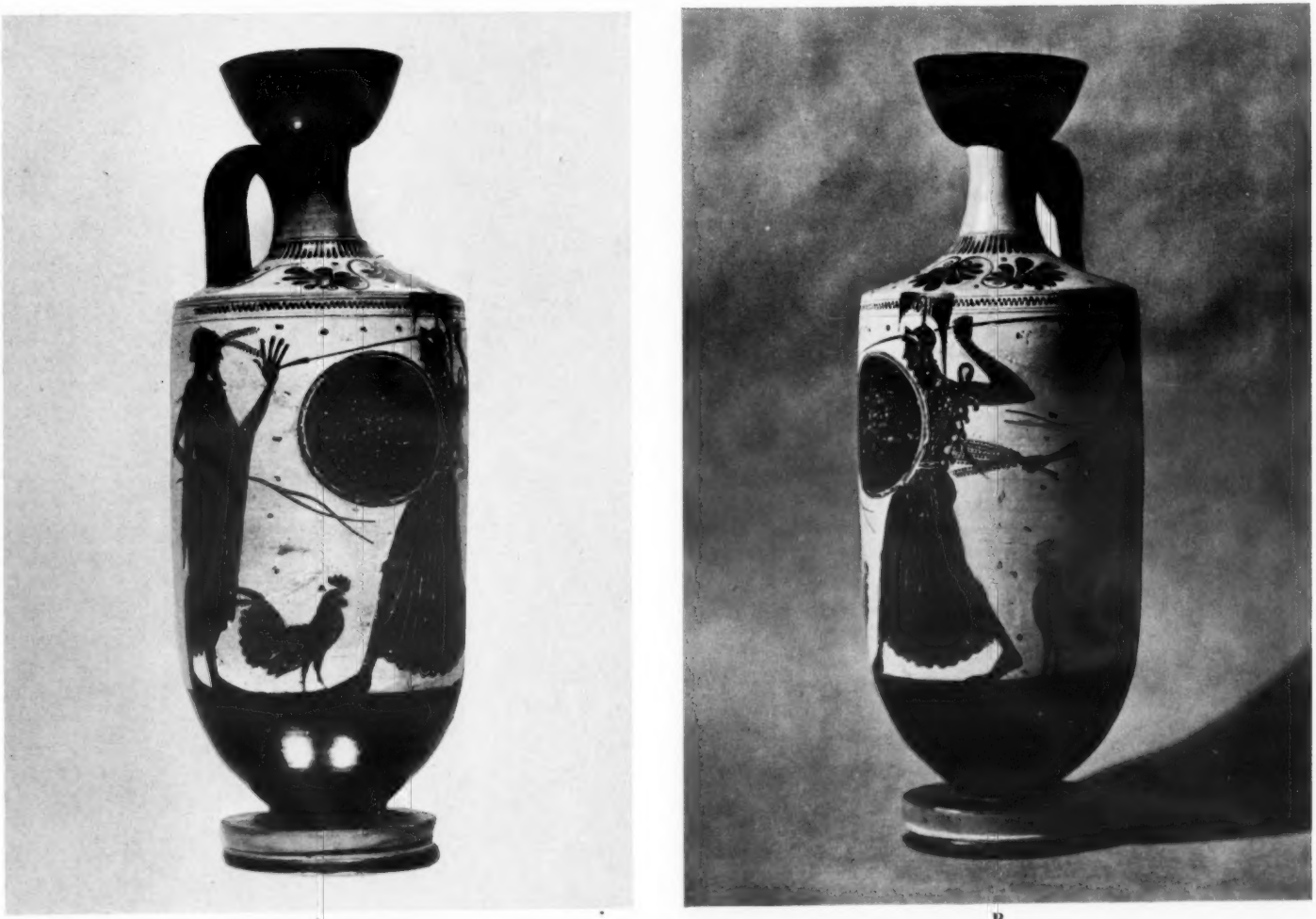
FIG. 1. — LEKYTHOS OF THE DEIANEIRA MASTER
(Courtesy of the Director of the Albright Art Gallery, Buffalo)



A B

FIG. 2.—LEKYTHOS WITH ATHENA POLIAS
(Courtesy of the Director of the Albright Art Gallery, Buffalo)

reads: "Athena between men with cocks" and, though inexact, can only refer to this vase. Haspels states that Beazley saw the vase in the Roman market and attributed it to the Athena painter. Thus it belongs to the early fifth century, ca. 500–485 B.C. Athena appears in a striding position, fully armed, with high-crested helmet, aegis, lance and shield with a snake as device. On each side of her is a cock. Facing her is a man saluting; behind her, a trainer with rods. Both hold in their left hands olive branches and are also crowned with twigs. The inscription seems to be written by an uneducated man, who did not quite understand what he was copying. But it seems to contain the words ιερον, written ιερον (fig. 2A), and ιεροποιος written ο·εροιπος (fig. 2B).[11] Thus these two men may be organizers of holy games (ιεροποιοί), the participants in which need discipline and rewards. There can be little doubt that they are organizers of the Panathenaic games, for Athena is the type found on all Panathenaic prize amphoras,[12] for example, the contemporary amphora in Toronto (fig. 4),[13] attributed by Beazley and D. M. Robinson to the Eucharides master and dated 500–485 B.C. Other contemporary or slightly later Panathenaic amphoras, painted by red-figured masters, are the amphoras by the Kleophrades painter,[14] two of them in the Metropolitan Museum, and by the Berlin

FIG. 3.—PANATHENAIC AMPHORA
(Courtesy of the Director of the Royal Ontario Museum, Toronto)

and trainers, on belt, rim of shield and end of helm crest of Athena, hair-band and beard of trainers, crest, crop and back of cocks.

[10] *Op. cit.*, p. 256, no. 34, in Appendix XV b.

[11] A copy made by Professor Dinsmoor from the vase, a tracing made by Thalia Phillies and my own reading agree in the following points: to the left of Athena IEΓON, above NOΛO-VON and to the right of Athena O.EPOIΓO<.

[12] Stephani, *CR.* 1876, Suppl., pp. 8–108; *Mon Inst.* X, pls. XLVII–XLVIII n; Walters, *Catalogue of Vases of the British Museum*, 46 F. pp. 98 ff. B. 130–146, pl. III; Von Brauchitsch, *Die Panathenäischen Preisamphoren* 1910; Graef, *Vasen von der Akropolis* i, pp. 109–126, nos. 912–1116, pls. 56–64; Pfuhl, *MuZ.* i pp. 330 ff., §§346–349; iii, pp. 81–84, figs. 300–309.

[13] D. M. Robinson, Cornelia Harcum, and J. H. Iliffe, *Catalogue of Vases in the Ontario Museum at Toronto*, pp. 155 ff., no. 350, pl. LIV. By Eucharides, also *BMCat. Vases*, B 133, attributed by Beazley, *AV.*, p. 97.

[14] Beazley, *PBSR.* xi, 1929, pp. 12 f., pl. x, 1; *Vases in Poland*, pp. 7 f. pl. i; *Bilder griech. Vasen* vi, *Der Kleophradesmaler*, p. 29. To be added, Shear *AJA.* 33, 1929, p. 519, fig. 3. Beazley, *Vases in American Museums*, p. 44, fig. 25. Dated by Beazley ca. 480–470 B.C.

painter.[15] The cocks on the Buffalo lekythos are similar to those which appear on all Panathenaic amphoras before the middle of the fourth century, standing on the Doric columns flanking Athena, with the exception of the earliest, the Burgon Amphora.[16] They are symbols of a fighting spirit and therefore appear also in the hand of Agon on the throne of the priest of Dionysos in the theater at Athens.[17]

Athena is similar to representations found on Panathenaic vases. This Athena is therefore the one for which the Panathenaic festival was given,[18] and the men are the organizers of the feast. The rods are necessary to discipline the athletes who competed at these games. The branches in the hands of the *hieropoioi* are olive branches from the sacred trees of Athena and the snake on her shield may mean the Erechthonios snake, though other Panathenaic vases have all kinds of shield devices.[19] The dress must be the Panathenaic peplos, which is represented in the center of the Parthenon east frieze.[20] It could not be for the gold and ivory figure of Phidias' Parthenos. Aristophanes *Birds* (produced 414 B.C.), v. 826 ff., tells us expressly that it was for the Athena Polias.

Chorus: "Who will be the god protecting the people? For whom are we going to weave the peplos?"

Euelpides: "What? Do we not have Athena Polias?"

The Athena on the Buffalo vase, almost identical with those on Panathenaic amphoras, thus is not the "Promachos" or the "Palladion," as she is often called,[21] but the Polias. This statue was made of olive wood [22] and was considered very old. Another proof of this is that Athena appears in the same guise on vases rep-

[15] Beazley, *Bilder griechischer Vasen* ii, *Der Berliner Maler*, p. 21, nos. 1–4. Cf. p. 15. They are school works, to be dated ca. 480–460.

[16] Excavated near Athens by Burgon in 1813. Dated 566–560 B.C. *BMCat. Vases* ii, p. 98, B 130; *MonInst.* x, pl. XLVIII, 1 (in color); Brauchitsch, p. 30, no. 1; G. W. Elderkin, *Archaeological Papers* iv, 2, p. 2 f., fig. 1.

[17] Sven Risom, in *Mélanges Holleaux*, 1913, pp. 257 ff., pls. 8–11; Fiechter, *Dionysostheater* i, pp. 62 ff., figs. 54–55; Bieber, *History of the Greek and Roman Theater*, p. 240 f., fig. 336.

[18] Cf. on the Panathenaic festival: Michaelis, *Der Parthenon*, p. 6 f. Cf. for the *hieropoioi*, pp. 318 ff. and the inscription, p. 332, no. 219: "They have to make the night festival as beautiful as possible for the goddess and with the rising of the sun to begin the procession and they have to punish those who do not obey with the legal punishment . . ."; IG. i, 188; Dittenberger, *Sylloge* i², no. 51, line 5 ff.; ii², no. 496, A 13; Oikonomos, Ἐφ. 1911, pp. 224 ff., Premerstein, *JOAI.* xv, 1912, p. 7 f.

[19] Cf. Brauchitsch, *op. cit.*, pp. 115 ff. A more complete list has been compiled by Miss Newman in her master's thesis, Columbia University 1939. The snake appears on 12 vases.

[20] Michaelis, *Der Parthenon*, p. 257, pl. XIV, figs. 34–35. He says: "The Athenian Polias wears it according to the Dresden statue and the Panathenaic vases as chiton;" A. H. Smith, *Sculptures of the Parthenon*, p. 53, pl. 35; Collignon, *Le Parthénon*, p. 37, pl. 127, nos. 34–35. He believes that the delivery of the peplos took place in the interior of the temple ("la remise du peplos sans doute dans l'intérieur du temple"). Premerstein, *op. cit.*, pp. 1 ff. and *AM.* 38, 1913, pp. 209 ff. believes that the scene is laid in the Agora. Elderkin, *loc. cit.* rightly saw, that "the destination of the procession which carried the peplos was the old temple of Athena that adjoined the herkos of her sacred olive tree. To her image of olive wood the peplos was originally presented."

[21] For example, "Athena Promachus": Robinson, *Vases at Toronto*, p. 155; Graef, *Vasen von der Akropolis* i, p. 252 f. He names the seated one Polias, *op. cit.* ii, p. 76, no. 806. "Palladion": Eduard Schmidt, *Archaistische Kunst*, pp. 11 ff., pls. I, II, v. He thinks it "an image in archaic taste."

[22] Scholion to Demosthenes xxii, 13, p. 597. Other writers also testify that it was of wood: Plutarch, *De Daedalis Plataensibus*, fragm. 10, ed. Didot v, p. 20; ed. Dübner iii, p. 20; Apollodoros iii, 14, 6. Cf. the list of 13 passages on the Polias collected by Arthur Stoddard Cooley, "Athena Polias on the Acropolis of Athens," *AJA.* 2nd Series, iii, 1899, pp. 369 ff; cf. pp. 372 ff.

resenting the birth of Athena. Sometimes, as on an amphora by Amasis and on a cylix in the Metropolitan Museum,[23] she stands on the lap of Zeus in the same pose as the Polias. These vases have been collected by Cook.[24] He rightly names her Polias, because the Zeus with the thunderbolt, from whose head she emerges, is the Zeus Polieus.[25]

The peplos was renewed every fourth year by the noble virgins who worked the wool (*erria*) and therefore are called the *Errephoroi*, because they superintended the weaving, or *Ergastinai*, because they wove the peplos.[26] They made it of many-colored wool, with rich patterns, particularly in the representation of the Gigantomachy (cf. Euripides, *Hecuba* [produced ca. 425 B.C.] v, 466 ff.). She pictures to herself what will be her fate in the hand of her Greek masters:

"In the city of Pallas shall I upon her saffron robe weave horses yoked to the car, decorating them on my web in brilliant varied shades, or the race of Titans whom Zeus, the son of Chronos, slays to their unending sleep with bolt and flashing flame."[27]

The differences in the dresses of the Panathenaic Athena and the piecing together of the dress which appears on many Panathenaic vases, in contrast to the uniform pictures on others, show that the statue was draped in different dresses woven by a group of girls which numbered, around 100 B.C., as many as 120.[28] The gigantomachy is depicted on the Dresden Athena,[29] one of the several marble copies of the same type published by Bulle and dated in the fifth century.[30]

Many scholars believe that the peplos was for the palladion, a small statue, for which the dress would be too big, or for a seated Athena evidenced by terracotta

[23] Cook, *Zeus* iii, pp. 681 ff., figs. 492–495. To be added, the cylix Metropolitan Museum of Art, no. 06.1097. Dated ca. 550 B.C. G. Richter, *Handbook of the Classical Collection*, p. 85, fig. 53, 2. It is the oldest example of the type.

[24] Cook, *op. cit.*, pp. 668 ff., fig. 480, pl. LIV–LV, figs. 484–5; p. 700, fig. 517 (black figured); p. 675, pl. LVI, fig. 486; p. 709, fig. 526 (red figured vases). Etruscan mirrors under the influence of imported vases, ii, pp. 709 ff., pl. XXIX; iii, pp. 677 ff., figs. 488–490.

[25] Cook, *op. cit.*, pp. 570 ff.

[26] U. Köhler, *AM.* viii, 1883, pp. 57 ff.; Foucart, *BCH.* xiii 1889, pp. 169 ff. The references collected by Cooley, *op. cit.*, p. 378 f. Cf. p. 383 f. and p. 358, no. 17. In the inscription *IG.* iv², no. 477 d of ca. 100 B.C., ca. 100–120 girls are named. The large peplos was pieced together from the various pieces made by individual girls. Therefore, it has more borders and inset strips than appear on any other works of Greek art.

[27] The scholion to *Hecuba* 468 names *krokos* and *hyakinthos*, i.e. yellow and violet colors, the same that we find on the Burgon amphora. Cf. for the gigantomachy, also Scholion to Aristophanes *Knights* 566: "We will praise our fathers who were worthy of this land and the peplos." Scholion: "The Athenians worked the peplos for Athena every four years. On it was Enkelados, whom Athena killed." Cf. Dübner, *Scholia Graeca in Aristophanes*, p. 54; Proklos to Plato, *Timaeus*, p. 26, also mentions the giants defeated by the gods on the peplos of the Panathenaia, and Scholion to Plat. *Rep.*, p. 327 a, mentions the peplos brought to the goddess in which her victory and that of the other gods over the giant was shown. Still in the Augustan period the poem *Ciris*, attributed to Vergil, states (v. 29 f.): "*ergo Palladiae texuntur in ordine pugnae magna Giganteis ornantur pepla tropaeis.*"

[28] Cf. note 26.

[29] P. Herrmann, *Skulpturensammlung Dresden, Verzeichnis der antiken Original-Bildwerke* 12, no. 26, pl. II; Brunn-Bruckmann, *Skulpturen*, pl. 149; Elderkin, *Art in America* 28, 1940, p. 158 ff., fig. 1. The statue is not in the "Gemäldegallerie," but in the sculpture gallery, Museum Albertinum.

[30] Finn, *JHS.* xxxii, 1912, pp. 43 ff., fig. 1 and pl. I; Bulle, "*Archaisierende griechische Rundplastik*," in *ABA.* xxx 2, 1918, pp. 6 ff., pl. I, 1–7.

statues, vases and coins.[31] One of these vases is by the same Athena painter and shows worshippers, an altar and columns of a temple[32] and thus also a cult statue. But this Athena does not look so old as the striding Athena and she always wears an Ionic chiton, introduced into Athens in the period of Peisistratos. Her type varies in the position of her head and arms, and in the objects in her hands. Remarkable in the fragment from a pinax on the Acropolis is the running Nike acroterion on the Ionic temple in a developed archaic style, like the Nike from the Peisistratid temple. Thus the seated statue may be a creation of the period of Peisistratos.

The Polias, who got the peplos, was older. She was said to have fallen from heaven or to have been set up by Erechthonios or by Kadmos,[33] i.e. by the heroes connected with the Erechtheum. The tall maiden fully armed and dressed as Athena who accompanied Peisistratos (Herodotus i, 60) was certainly standing and may have imitated the Polias.

Now there can be no doubt that the Polias was later standing in the Erechtheum. I can visualize her here in the broad and rather shallow cella,[34] standing between the two columns with the cocks for which there is also ample space in the cella which is about 30 feet or 9 meters broad. The cult statue was lighted up by her shining weapons, her high crested helmet, her crocus and hyacinth colored peplos,[35] by the rare feature of two windows in daytime and by the flames of the golden lamp of Kallimachos in the evening and night when the *hieropoioi* prepared the festival.

Paton and all scholars since Frickenhaus,[36] however, believe that the seated Athena was put up in the Erechtheum, while the warrior Athena stood in the temple erected by Peisistratos, in contrast to older scholars like Stephani, Otto Jahn, Furtwängler and Petersen. But the oldest Panathenaic vases with the warrior Athena are older than this temple, and there are vases, for example a sherd with the birth of Athena from the Klitios group,[37] which are still older. I believe that Athena stood in a small shrine in the group of sanctuaries which were later combined into the Erechtheum.[38] Peisistratos did not set her statue up, as his temple was probably

[31] Frickenhaus, *AM.* 33,1908, pp. 17 ff., figs. 1, 3–4; Haspels, *Attic Black-Figured vases*, p. 47 f., pl. 15, 4 by the Acheloos painter and pp. 110, 149, 157, note 2, 257, pl. 47, 2, by the Athena painter; Gerhard, *AV.* p. 242; Michaelis, *Arx Athenarum*, pl. 37, 5; Benndorf, *Griech. u. siz. Vasenbilder*, p. 104, pl. 52, 4; Pfuhl, *MuZ.* i, p. 314; iii, fig. 297; Schöne, *Griechische Reliefs*, pl. XXI, nos. 91–2; Graef, *Vasen* i, p. 248, pl. 105, no. 2549; p. 252, pl. 109, no. 2582; ii, p. 12 f., no. 166, pl. 6, Euergides painter; p. 76, no. 806, pl. 72, Myson; Imhoof-Blumer and Gardner, *Numismatic Commentary on Pausanias*, p. 136, pl. A A, nos. XX–XXI. This is decidedly a bronze figure of a peaceful Athena, the forerunner of the Parthenos. She seems to stand in a bronze factory on the Euerigides vase.

[32] Haspels, *op. cit.*, pp. 147 ff., pl. 47, 2; Graef, *op. cit.* i, p. 248, no. 2549; cf. the acroterion Eduard Schmidt, *JdI.* 35, 1920, pp. 97 ff., figs. 1–2 and 110, fig. 10. This is decidedly a Peisistratid type.

[33] Cf. for the origin of the Athena Polias: Michaelis, *Arx Athenarum*, p. 68 f., note 36* and Frazer, *Commentary on Pausanias* ii, pp. 573 ff. to Pausanias i, 26, 5. Pausanias believed the statue to have fallen from heaven, but mentions other opinions. Eusebios, *Praec. Evang.* x, 9, 22, names Cecrops and Apollodoros iii, 14, 6, 6 names Erechthonios as dedicator.

[34] Paton, *The Erechtheum*, pp. 38 ff., fig. 29, pl. I–II.

[35] Cf. note 27.

[36] *AM.* 33, 1908, pp. 17 ff.; *Tiryns* i, pp. 109–111; Paton, *The Erechtheum*, p. 433, note 4.

[37] Graef, *op. cit.*, i, pl. 66 f., no. 597 a, pl. 24. Contemporary with Peisistratos are the birth of the Polias on the cylix by Phrynos, British Mus. B. 424. Beazley, *JHS.* lii, 1932, p. 170, pl. v, 2.

[38] Perhaps this shrine is meant on vases with the warrior Athena between a column, snake and an altar on which stands a cock, in London: Walters, *Cat. of Vases, British Mus.* ii, p. 76 f., B 80; Cecil Smith, *JHS.* i, p. 202 ff., pl. 7; Farnell, *Cults of the Greek States* i, pp. 332 ff., pl. xv b, cf. xv c in Berlin;

not finished then, but he gave her a new dress every fourth year. The Polias survived the Persian invasion because the fleeing Athenians took her with them.[39] The seated statue probably was destroyed with the "grandfather" of the Parthenon and was replaced by Pheidias' Athena Parthenos. I think that the warrior Athena would not have been repeated again and again if she had been the Peisistratid one, and that the seated Athena would not have disappeared from vases if she had been the rescued one. Therefore, I believe that the warrior Athena is the oldest wooden cult statue of the Acropolis, the Polias, who was the protector of the people and therefore is also used for the Pallas, who protects Kassandra.[40] She is also the mistress of the Panathenaic games. Peisistratos made the people give her a new dress every fourth year, and she may have received a new shield, helmet and aegis also from time to time. The aegis could be taken from the statue, for each Gamelion, the wedding month, the priestess of Athena took it to the houses of the newly wed and sanctified the new houses,[41] as a catholic priest sanctifies with incense. Therefore, I have no doubt that the Panathenaic Athena by the Athena master on the Buffalo lekythos represents the wooden Athena Polias, set up in one of the oldest temples dedicated by Erechthonios or Kadmos near the olive tree and then given in the late fifth century a permanent new home in the Erechtheum. The seated statue was destroyed in the fire of 480, but the wooden striding image survived.[42] The outstretched limbs make it easy to revest the standing statue every fourth year while this would hardly be possible for a seated statue.

I believe that Phidias alludes to this old statue in the sculptures of the Parthenon. Above the place where the priest in the center of the east frieze folds the new peplos could be seen the warrior Athena Polias in the center of the east pediment, as she had just sprung from the head of Zeus Polieus.[43] This explains why the peplos is

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and in Athens, *Graef, Vas. von der Akrop.* i, p. 136, no. 1220, pl. 67. Athena is here also venerated by girls and a man with olive branches.

[39] Plutarch, *Themistokles* 10. He tells that they lost the gorgoneion on this occasion.

[40] Cf. note 22. The type is used for the Trojan palladion to which Kassandra flees from Ajax: Berlin, Gerhard, *Etruskische u. kampanische Vasenbilder*, p. 31 f., pl. XXII; Benndorf, *Griech. u. siz. Vasenbilder*, p. 103f., pl. 51. From the Gallatin Collection in the Metropolitan Museum, *BMMA.* xxxvii, 1942, p. 53 f., fig. 2; M. Z. Pease, in *CVA.*, United States of America 8, p. 85, no. 2a, pl. 35.

[41] Zonaras, *Lexicon*, s. v. *aigis*. p. 77; Cf. Brückner, *AM.* 32, 1907, p. 114; Cecil Smith, *JHS.* i, p. 206.

[42] Beside the Panathenaic vases which end with the period of Demetrius Poliorketes, we have the warrior Athena on other black-figured vases like the Buffalo lekythos. Cf. the white-ground Pinakes on the Acropolis (Graef i, p. 252 f., pl. 109, nos. 2583–2590); the lekythos in Palermo by the Edinburgh painter of about 500 (Haspels, *op. cit.*, p. 89, note 2; p. 152, Appendix IX; p. 218, no. 48, pl. 29, 1); the lekythos in the British Museum B 146, by the Marathon painter (Beazley, *JHS.* 27, p. 272, fig. 16; *CVA.* pl. 6, 3; Haspels, p. 220, no. 77) and another by the Athena painter in the Taranto Mus., no. 25 (Haspels, p. 256, no. 37). Cf. other examples in note 38. We also have the type in a bronze statuette ('Εφ. 1887, p. 138, pl. 7) and on votive reliefs (Schöne, *Griech. Reliefs*, pl. XIX, no. 84; Svoronos, *Athener Nationalmuseum* ii, no. 1743, p. 472 f., no. 163 B, pl. C1). Later it was used, as on the latest Panathenaic vases, turned to the right, with an added shawl, on coins of Athens and of Demetrios 1. (Imhoof-Blumer, and Gardner, *Numismatic Commentary on Pausanias* p. 135, no. 13, pl. AA, figs. XIV–XVI; Regling, *Münzen in Berlin*, p. 50). Ptolemy I took the type over and added an eagle at her feet (Rostovtzeff, *Social and Economic History of the Hellenistic World* i, p. 184, no. 3, pl. XXVIII; Newell, *Royal Greek Portrait Coins*, p. 24; Hill, *L'Art dans les Monnaies grecques*, p. 52, pl. XLIV, 2).

[43] Cf. recently, Rhys Carpenter, "The Lost Statues of the East Pediment of the Parthenon," *Hesperia* ii, 1933, pp. 2 ff., pl. II; Cook, *Zeus* iii, pp. 688 ff., pls. LVII–LVIII, figs. 499, 503–513. Cf. note 20.

brought to the Parthenon, though it did not belong to the Athena Parthenos. We must not look down to the door behind which the gold and ivory Parthenos stands, but above to the pediment.

Therefore, I suggest that we call the Athena of the Panathenaic amphoras and of the Buffalo lekythos Athena Polias.

Columbia University MARGARETE BIEBER

THE FEZZAN EXPEDITION

A SCIENTIFIC expedition, composed of 11 members which General Catroux and the Office of the Commissioner of War had sent into the Fezzan on February 18, 1944, has just returned to Algiers. Mr. Despois, head of the expedition (human geography); Mr. Le Blanc, former dean of the Medical University of Algiers (anthropology); professor Dallonnie (geology); Mr. Killion (botany); Mr. Francis Bernard (zoology); Mr. Bellair (geology); Mr. Reygasse, curator of the Bardo Museum, Mr. William Marçais, member of the Institute; Mr. Capot-Rey (physical geography); Mr. Quenet, director of the "Institut Meteorologique et Physique du Globe" of Algeria; Mr. Leschi (archeological excavations) had been entrusted with gathering information on the Fezzan. Some of the members, such as Mr. Le Blanc and Mr. Reygasse, are experienced Saharians and were members of the Mission which in 1928 explored the Hoggar region. These 11 men studied the desolate regions that were recently made famous by the strange march of General Leclerc's "Calots Rouges." Professor Bellair has given the following details on the work and the results obtained by the expedition to the editor of "France-Afrique," the French news agency.

"We traveled through the Chat country and the Fezzan, which is placed under Algerian administration, under the sovereignty of the military governments of the Fezzan and Ghadames. I must tell you of the admiration felt when we recalled the exploit of General Leclerc's column which, coming from the Chad, infiltrated itself in the narrow gulley lying between the Murzuk erg[1] and Djebel ben Chnema. We made a pilgrimage to Tegertti, El-Gatroun and farther north to Um-el-Rhaleb, which are the only theaters of French and Italian warfare. As a matter of fact, in Murzuk and Sebha, the Italians withdrew from their positions before the French arrived, although they were well supplied with ammunition. In Murzuk and Sebha, the "Lorraine squadron" accomplished wonderful work; hangars on the air field were razed to the ground, but the oasis was untouched. Murzuk will always be a famous French site and future generations will bow before the grave of that great hero, Colonel d'Ornano.

Speaking of the results obtained by the expedition, Professor Bellair stressed that for the first time the Murzuk erg had been crossed by Capot, Rey and Quenet. In addition to this exploit, the zoologist Francis Bernard, collected more than 700 species of fauna in 2 months, while in 10 years the Italian scientists had only reported 540 species, Mr. Quenet was able to make a survey of the itinerary based on accurate astronomical points. Mr. Dallonie linked up the Italian geological discoveries on the Tibesti plateau with his own. Mr. Leschi undertook the excavation of the necropolises surrounding the Chat oasis. He will soon bring light on the origin of the Garamantes, described by Ptolemy, and other ancient historians. Mr. Bellair explored the salt lake region of the Doubari erg in the Touareg country. Italian information on this region was fragmentary and partly inexact. Mr. Reygasse

[1] Erg—Saharian sandhill.

brought back many documents and specimens for the Bardo Museum, particularly belts made of woven leather and cowries.[2] Mr. William Marçais studied the dialects of the Oued Chiati, lying north of Sebba. This region is a boundary between Egypt and North Africa and is a melting pot of all the languages and dialects of men who for centuries have been going from East to West. In conclusion, Professor Bellair expressed his satisfaction and that of the members of the expedition with the results obtained.

The Fezzan is a vast desert region lying to the south of Tripolitania on the shortest route from the Mediterranean to Lake Chad. It has sterile, rocky plateaus; rust-colored sand dunes; and its rare oases are scattered far around Murzuk, the capital. This region has divulged some of its secrets to the French mission. The expedition was arranged after General Leclerc and his heroic soldiers had accomplished their wonderful march. It was undertaken under extremely difficult conditions; there were no modern means of transportation and the members of the expedition were obliged to ride on camels. But all these difficulties were overcome and the expedition has greatly enriched the scientific heritage of France.

(Algiers Office of the Commissioner of Information).

[2] Cowries: shells used as money in ancient times throughout North Africa.

OBSERVATIONS ON SEVENTH-CENTURY GREEK SCULPTURE

In a brilliant paper entitled "Observations on Seventh-Century Sculpture," [1] the late Frederick R. Grace discussed and analyzed the various foreign influences discoverable in Greek sculpture of the seventh century B.C. The present paper is not concerned with these influences, but rather with the reason why certain areas of the Greek world suddenly abandoned the geometric style in favor of another, less artistic form of sculpture. That foreign influences are to be found in Dorian plastic art of the seventh century is readily admitted, but it is another point, and students of the subject are referred to Grace's acute remarks as to whether they come from Phoenicia, Assyria, Egypt or elsewhere.

We must determine first, however, whether there ever was such a thing as Dedalic (essentially Dorian) sculpture, for Grace says [2] that "the Dedalic style is not Dorian and is not limited to Crete and the Peloponnesos" and in a summary of his paper before the Archaeological Institute in 1941 further maintained [3] that "the distribution of remains of this art over a wide area indicates that it was in a sense a national style." But when we examine the chronological table of Dedalic stone and bronze sculpture in Jenkins' study,[4] we see that the fabric of every piece is Dorian (except those with interrogation marks, half of which, however, are Dorian). Furthermore, since Dedalic sculpture consists chiefly of terracotta figurines, Jenkins' "Index of Sites Yielding Dedalic Statues and Statuettes" [5] becomes of particular importance; not only are more than half the sites Dorian, but the overwhelming number of objects comes from these places. Isolated finds of Dedalic sculpture on non-Dorian sites, I submit, do not make it a national style, or even necessarily the predominant style of those places; seventh-century Greece was not divided into watertight compartments.[6]

We have to decide two fundamental points, which, taken together, form the cardinal problem of seventh-century Greek sculpture. First of all, why did certain areas in the Greek world, chiefly Dorian, happen to adopt the Dedalic style, and, secondly, why did not other areas, chiefly non-Dorian, similarly break with their geometric past? These other areas exhibit a steady sculptural development from the geometric, so that their art differs radically from the Dorian in the seventh century.

Geometric plastic art [7] is realistic and individualistic, with a true feeling for the three-dimensional, whereas Dedalic sculpture banishes naturalism and the profile view and becomes formularistic; the free geometric modelling has yielded to an exclusive frontality. Few persons, probably, would maintain that the new style

[1] *AJA.* xlvi, 1942, pp. 341 ff.
[2] *Ibid.*, p. 347.
[3] "Notes on the Daedalic Style," *AJA.* xlvi, 1942, p. 122.
[4] R. J. H. Jenkins, *Dedalica*, 1936, p. 87.
[5] *Ibid.*, p. 95.
[6] For the purpose of this paper, however, Dorian and Dedalic do not have to be the same; indeed, it only obscures the issue to put the question in that fashion. The essential point is whether Dedalic sculpture "was in a sense a national style," or whether, as I believe, there were two very different styles in the seventh century, the Dedalic and, what we may call here, the non-Dedalic; concerning the latter, see below.
[7] *AM.* lv, 1930, pp. 141 ff.; A. Roes, *Greek Geometric Art*, 1933.

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does not mark a distinct retrogression, aesthetically; in any case, every one will agree that the whole point of view is different. Various explanations of this phenomenon have been offered. Gotsmich,[8] for example, regards the early archaic block body as a reaction from the geometric, as if the geometric were an over-ripe style. Jenkins dismisses the mould as the cause of the new frontality and suggests that in the small shrine of early days we come face to face with the cult statue, where no profile view is possible or necessary. The same absence of feeling for the three-dimensional is to be found in Dorian stone sculpture at the end of the seventh century, and in the case of the Auxerre statuette Miss Richter[9] has intimated that the sculptor was too timid to hew deeply into the stone—which is true enough, but we need to know the reason for the sculptor's timidity. It must be emphasized, however, that the new Dedalic style was not typical of large areas of the Greek world in the seventh century. Contemporary Attic sculpture, for instance, develops naturally from the geometric, and thereby, of course, contrasts sharply with the Dedalic. Early seventh-century clay heads from a Dipylon grave are a cubic solid,[10] and the famous Dipylon head, to select another example in stone from the end of the century, is also three-dimensional. Racial rather than topographical circumstances, according to Jenkins, explain the complete independence of Attic sculpture from Dedalic. But the problem is too deep to be explained by one common denominator, whether race, religion or reaction.[11]

The controlling fact about seventh-century Greek sculpture, I believe, is its social and political background. I imagine this must be true of every period, but particularly so of a period of revolution such as the one under consideration. After all, one of the most important revolutions in European history, and certainly the most decisive in ancient Greek history, occurred about 700 B.C. For generations before this time the Greeks had lived in a simple and isolated society, ruled by aristocracies. Then, suddenly, new forces burst upon their world. The invention of coinage, for example, and its introduction into an agrarian society, created a new form of wealth, independent of land, and constituted a threat to the power of the nobles. The concomitant rapid rise of industry further depressed the poor, while the growth of the hoplite force meant that these middle-class foot soldiers would not be content until they, too, had a share in the government. And in some places, particularly around the Corinthian Isthmus, there was intense racial hatred between Dorian and non-Dorian.

Unrest, then, was typical of Greece in 700 B.C., and the masses, who had never heard the word "democracy," destroyed the hated system of aristocracy in some states by rallying round a leader. Contrasting the experience of France and Germany in the late eighteenth century, we may say that the masses are often helpless before many nobles and that democracy can be more readily won if the targets are first reduced, so to speak, to a single ruler. Tyranny, as the Greeks termed one-man

[8] A. Gotsmich, *Probleme der frühgriechischen Plastik*, 1935.
[9] G. M. A. Richter, *The Sculpture and Sculptors of the Greeks*[2], 1930, p. 93.
[10] *AA.* 1933, p. 271, fig. 7.
[11] See, further, my paper on "The Development of Archaic Greek Sculpture," *AJA.* xlii, 1938, pp. 451 ff.

rule, was therefore a forward (though unconscious) step on the road to democracy, for the tyrant, understanding the basis of his power, governed in the interests of the masses, who, once their own level had been raised, could then destroy the tyrant and rule in his stead.[12]

The most important single factor in the revolution we have just described was the widening of the Greek horizon, for it led to a period of questioning and to those centuries of exuberant growth known as archaic Greek civilization. Colonization, commerce, and new ideas from the East were responsible for a veritable renaissance. But progress was not achieved everywhere at once, because in those places where there had been violent revolution the arts received a momentary setback.[13]

If this general idea is true, we have the key to an understanding of seventh-century Greek sculpture. The solution, we have suggested, must take into account large areas which differ from each other and stand in a different relation to their immediate, common past. Their common heritage was geometric sculpture, the product of aristocratic days, but where revolution occurred, sculpture breaks with its past and begins, as it were, anew. This was due in part to the violent shock to normal life, and in part to the deliberate efforts of the tyrants, who had fomented revolution, to destroy memories of aristocracy.[14] It was, of course, primarily in those areas (chiefly Dorian) where Dedalic sculpture became the fashion, and not, for example, in Attica, that this revolution had been violent. Foreign influences are to be found inevitably in the new Dedalic style, for they were strongest along the trade-routes where tyranny flourished. In Attica, on the other hand, the transition from aristocracy was gradual and consequently the sculpture displays no sharp break with the geometric; at the same time it differs strongly from the Dedalic. The close connection between life and art in seventh-century Greece is clearly seen.

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[12] Wade-Gery, *CAH.* iii, p. 549, speaks of tyranny as "an interregnum between the mediaeval aristocracies and the classical democracies and oligarchies." See, further, my paper on "Greek Tyranny," *AHR.* xlii, 1936, pp. 68 ff.

[13] When tyranny finally came to Athens in the sixth century, civilization was so firmly entrenched that we have no problem of a break with the past; the problems are then of a different sort, though still concerned with the connection between life and art—see note 11.

[14] Similar efforts of the tyrants in other fields, notably that of religion, are well known.

A WREATH IN THE VASSAR CLASSICAL MUSEUM

ALTHOUGH a number of wreaths of gold, silver, or bronze, have been preserved from the ancient world, one of gold and silver leaves now in the Vassar Museum would appear to be unusual in its representation, and offers several interesting problems. It is well preserved in general and in detail (figs. 1 and 2), with minor exceptions to be noted below, and is well made, if not as beautifully executed as some of the finest pieces. There are 53 silver leaves, and 15 gold leaves, apparently fastened to a heavy bronze wire with an ellipse of 0.022 m. by 0.020 m. They are represented as being bound together by a gold fillet, and originally there was probably an ornament of some sort, possibly a flower or medallion, at the front, although the original existence of this ornament can be inferred only from the presence of a lump of solder at that point.

The silver leaves are ca. 0.019 m. in length from base to apex, and 0.013 m. wide, and were cut out of a thin sheet of metal. A heavy vein, with two flanking, slightly bowed veins, marks the axis; the end is retuse, or marked by a slight, rounded indentation, rather than coming to a point. The veins would seem to have been made by hammering the metal into a mold. Each leaf is the end of a long fillet, 3 to 4 mm. wide, which is wrapped spirally around the core and the wrapping of the leaf in front. Two or three of the leaves have been broken and repaired. As we shall see below, they almost certainly represent a box-wood spray.

Around the stems of the silver leaves is wrapped the gold fillet, some 2 mm. in width. It is so arranged as in every case to bind the silver leaves in place at the base. The fillet is continuous, and was not tied in a knot at the base, as wire fastenings are sometimes represented in other wreaths.

To the gold fillet at irregular intervals are soldered the gold leaves, ca. 0.012 m. wide and ca. 0.043 m. long, over all. They consist of a long, pointed blade with a thin vein running along the middle, and a narrow spine-like base by which they are attached. Some are mutilated; two or three have been soldered in place recently. One or two may be completely lost, as indicated by at least two lumps of solder with no leaf adhering (fig. 3).

It is perfectly evident, as has been noticed, that the wreath has been more or less extensively repaired since it was first made. A serious question exists, moreover, as to the full extent of remodelling the wreath has undergone in modern times. One may question, in fact, whether any of the gold belongs to the original wreath. Here even the most minute study of the Vassar wreath itself must remain inconclusive; nothing that I at least have been able to perceive can be considered positive evidence one way or another. Various people of estimable opinion have examined it; of these, some are skeptical as to the originality of the gold work; others see nothing against it.

Significant on this matter is a wreath in the possession of Mrs. Edward Newell, which I have examined with her most generous co-operation. This wreath was acquired by Mr. Newell some years ago from the same dealer who supplied ours; at that time, both wreaths were in his possession, and were said to have been acquired

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FIG. 1.—THE GOLD AND SILVER WREATH IN THE CLASSICAL MUSEUM AT VASSAR COLLEGE VIEWED FROM ABOVE

FIG. 2.—THE VASSAR WREATH, UNDER SURFACE

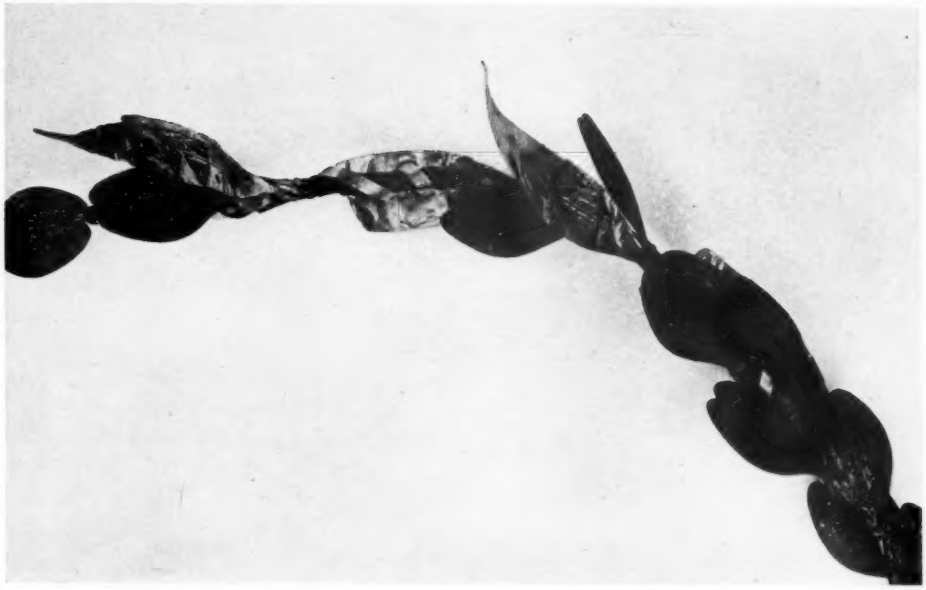

FIG. 3. — DETAIL OF VASSAR WREATH — RIGHT FRONT
(The Lump of Solder Referred to in the Text Appears at the Right of the Two Twists of the Gold Fillet, Attached to a Third)

FIG. 4.—A SPRAY OF LIVING BOX

by him together. The Newell wreath is a companion piece to ours: its format and construction are the same, but it is slightly smaller (0.18 m. by 0.165 m.). It has certain definite differences however, that indicate conclusively that its gold work is not contemporary with the silver. This was recognized by Mr. Newell at the time he acquired it. The differences are two. First is the fact that each of the gold leaves is pierced with from 2 to 4 needle holes, indicating that originally they were sewed on a cloth of some sort, or conceivably tacked lightly on some wooden object. In the second place, a study of the wreath reveals that before the gold fillet was attached, several of the silver leaves had been broken off, for the gold fillet is in several places wrapped over the broken stumps. Thus the silver wreath definitely antedates the gold work. Two conclusions, perhaps, are permissible: either the wreath was found in a grave, somewhat dilapidated, with a number of detached gold leaves lying about, and the latter were then joined to the former by modern artisans, or, conceivably (however unlikely) the same operation took place in antiquity.

The fact that the Vassar wreath was, according to all probability, found with the Newell wreath, and resembles it in so many respects, would suggest strongly that its history was the same. In fact, there is one place on the Vassar wreath where the gold fillet overlaps somewhat the broken stump of a missing silver leaf, but the inference is still not conclusive, for it is always possible that in this one instance the gold band may have slipped accidentally over the broken stump. For example, it might originally have been wound over a complete leaf, which later broke off beneath, allowing the fillet to drop in place over the stump. Or it might have been pushed into its present position by careless handling. Obviously these suppositions are purely speculative—perhaps far-fetched at that—and serve only to suggest that the one overlap of stump by fillet in the Vassar wreath does not constitute a clinching argument, although it acquires a good deal of weight considered in relation to the Newell wreath. Another dissimilarity between the two, however, consists in the fact that the gold leaves of the Vassar wreath are not pierced, and hence could not have come from the same source as those on the Newell wreath. It is still possible that they were found loose in a grave, but this idea is less compelling in the case of the Vassar wreath.

The general conclusion to be drawn from the above is that the presence of the gold in the original wreath must be regarded with skepticism, but that the possibility should not be completely dismissed.

For the date of the wreath we must resort first to comparative study, although it would appear that our example is sufficiently unusual to make inferences from such a study difficult. Miss Berta Segall, who has kindly examined the wreath and suggested many of the references that will appear below, was inclined at first to believe that it is early imperial. Her judgment was based in part on the rather tight, compact form of the wreath and its sparsity of leaves as compared with the luxuriant examples of the fourth century B.C. and the best Hellenistic pieces. Here, however, we must consider the kind of leaf involved—i.e., box, which by nature grows in tight, close sprays. Our wreath is, in fact, a good naturalistic rendition of a spray of box (fig. 4). Hence, even in the best period, the general form of the wreath must have been the same. Moreover, there are earlier examples of such relatively sparse ar-

rangements: one in Berlin in 1929 [1] dated in the fourth century; one from a third-century (?) grave in South Russia,[2] although this is of entirely different construction, the olive (?) leaves being attached in pairs to a band or thick core; one from a third-century grave at Halae,[3] although here again the leaves are soldered to a band; one of the fourth century from Olynthus,[4] in which the olive leaves are more abundant. Finally, some oak wreaths have, in general, the same compact effect as the Vassar box wreath, although the best examples are more luxuriant.[5]

Another technical peculiarity is the gold fillet (if it is original). This would be rare, if not unique, on ancient wreaths, and, according to Miss Segall, would suggest a late date. On the other hand, there is a similar effect in a wreath in the British Museum,[6] where (to quote from the catalogue) "long, pointed leaves in thin gold are attached by narrow ribbons (willow leaves?) which are fastened to the leaves like a clip and then wound around the wire." The differences are that the British Museum wreath has a fillet for each leaf, instead of a continuous fillet; and a different mode of attachment of leaf to fillet. The British Museum wreath is said to date from the fourth century, and hence the presence of the fillet itself would not be decisive in dating, but the less craftsmanly mode of attachment of the leaves would indeed suggest a period of decline (although some of the earlier examples indicated above are distinctly inferior in technique to their contemporaries). Final judgment as to the date of the wreath must be postponed until consideration of its use.

Hitherto we have described the silver leaves as representing box. As to this, there can scarcely be dispute after comparison of the crown (fig. 3) with a spray of living box (fig. 4); retuse leaves are not the commonest in the plant world, and among leaves suitable for making wreaths they are rather uncommon. The identification was first suggested by my wife, from comparison with box growing on the Vassar campus; later, it was definitely affirmed by the Natural History Division of the National Museum in Washington, and by Dr. E. D. Merrill and Dr. Alfred Rehder of the Arnold Arboretum,[7] on the basis of squeezes of the leaves sent by me. They not only so identified the leaf at first glance, but maintained their position over objections by me, arising from my inability to discover much evidence for the use of box in ancient wreaths.

I shall indicate below what evidence there is for box leaves in ancient practices, but first it may be interesting to point out a coincidence that may have some significance. As I have said, ancient writers seem to make no reference to the use of box for wreaths, even in the extensive account of Athenaeus (669–685) concerning materials used for garlands. Hence one would have *a priori* hesitation in accepting the identification with box. It would in some ways be more desirable to find a more

[1] R. Zahn, *Sammlung Baurat Schiller*, Berlin, 1929, no. 104, pl. 41.
[2] Reinach, *Antiquités du Bospore Cimmerien*, pl. v, no. 2.
[3] H. Goldman, F. Jones, *Hesperia* xi, 1942, p. 370, fig. 7.
[4] D. M. Robinson, "Metal and Minor Miscellaneous Objects," *Olynthus* x, 1941, p. 158, pl. 28.
[5] E.g., Pergamum: *AM.* xxxiii, 1908, p. 431, pl. xxv.
[6] No. 1626; Marshall, *Catalogue of Jewelry, Greek, Etruscan, and Roman in the British Museum*, 1911, pl. 29.
[7] I am particularly grateful to the painstaking generosity of Dr. Merrill and Dr. Rehder, which exhibited itself unfailingly through a long correspondence.

commonly used plant. Here search will reveal that on a live olive branch there are occasionally a few leaves which are not pointed, as the normal olive leaf is, but which are retuse, or indented at the end, as are our silver leaves. It is true, of course, that on most olives these retuse leaves are thinner in proportion than the silver leaves on our wreath (fig. 5); moreover, in most cases, the retuse leaves seem to be the result of some blight or insect bite. One might also think of the *olea buxifolia* (*capensis*), (fig. 6), but here the occasional retuse leaves are much larger than our silver leaves, and, moreover, according to the Arnold Arboretum, the *olea buxifolia* is a South African tree unknown in the Mediterranean until relatively modern times. Still, the fact remains that retuse leaves are possible on an olive branch, although certainly rare.

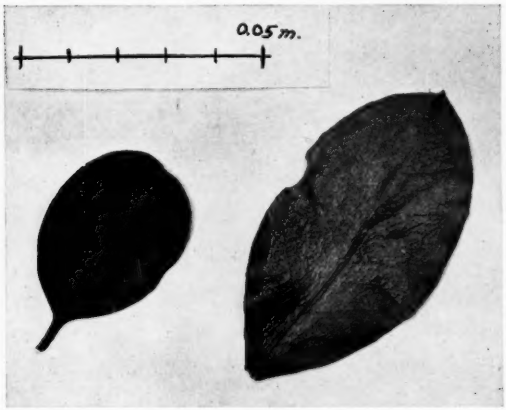

FIG. 6.—SPECIMEN LEAVES OF *Olea Buxifolia* FROM SAME TREE
(Courtesy of Arnold Arboretum)

On the other hand, one finds a confusion of coincidence in Pliny that may bear on the subject. He (xvi, 16 [28], Teubner) mentions three varieties of box—Gallic (*buxus sempervirens*), Italic (assumed to be similar), and oleastrum—the last *in omni usu damnatum*. In another place, however (xv, 4 [5] Teubner), he says that "oleastrum" is the name of the wild olive used to crown the victor at Olympia. Here several fields of speculation are available: the "wild olive" at Olympia may have in reality been a form of box (though this is hardly possible); it may have been a primitive or degenerate olive with a predominance of buxifoliate leaves, hence confused sometimes with box (this is hardly demonstrable, but possibly tenable); or there may simply be a confusion of nomenclature. The last is most probable, on present information, and it may have some bearing on our wreath. One might suppose, for example, that an artist, knowing that Olympic victors were crowned with "oleastrum," and being acquainted with a variety of box known to him as oleastrum, but not with the Olympic wild olive, may have created such a wreath as ours to represent such a crown.[8]

There is thus a bare possibility that the Vassar wreath represents, however, inaccurately, an Olympic crown, but the safer hypothesis is to consider it simply a funeral crown, the box being used, as were indeed olive and laurel, because of its

[8] If the gold work of the wreath is original, greater weight might be attached to the second hypothesis. One will observe that on an olive tree, old leaves about to fall sometimes become yellow. On the hypothetical primitive or degenerate wild olive, such leaves might be long and pointed, while the majority of younger leaves were short, rounded, and occasionally retuse. In figure 7, the oleaster variety of the olive, the modern "wild olive," has young leaves the size of box, some malformed to retuseness. To model for our wreath, the Olympic wild olive would have had to have a majority at least of retuse leaves.

FIG. 5.—HERBARIUM SHEET SHOWING LEAVES OF CULTIVATED OLIVE
(Courtesy of Arnold Arboretum)

FIG. 7.—HERBARIUM SHEET SHOWING LEAVES OF WILD OLIVE, ALL FROM SAME TREE
(Courtesy of Arnold Arboretum)

evergreen habit. As evidence for such a practice we have little enough. Martial (i, 88, 5) and Varro (*rei agr. auct.*, p. 296) mention box planted on graves; but this might have been a horticultural rather than a religious practice. There seem to be no parallels for the use of box in metal wreaths found in graves (or anywhere else). There is, however, some rather pointed evidence from two Roman graves in England, discovered in 1839.[9] In one of these, some peeled sticks were found, identified by a botanist as box-wood; in the other, some twigs and leaves, or sprays, of box appeared. Hence, it would seem that occasionally, even if rarely, box was strewn in graves as a bed for the corpse, or perhaps even woven into wreaths, as was common enough with other plants—olive, vine, origanum, and so forth.[10]

It is no evidence for or against the interpretation of the symbolism of box in antiquity to report modern uses, but it may well be that ancient Roman symbolism does survive in modern or recent practice in some parts of Europe. In Cologne it is said that box branches are, or were within the last century, strewn in the street before the house of a dead person, and in Switzerland box is put in coffins.[11] It would seem to have the significance of averting the Devil.[12] This probably stems from Roman usage, as box would appear to have been unknown in Germany in antiquity.

Hence, there is slight but incontrovertible evidence that, however rarely, box was used for funeral purposes, there is no inherent improbability in the theory that the Vassar wreath represents such a practice; and we may conclude that in all probability our wreath is a rare example of a real, if uncommon, funeral custom. This identification would add some light to the date and original milieu of the wreath. We have seen that the only references are Roman, and the sole actual usage of box Roman-British. Therefore, it seems most probable that the wreath does, in fact, date from early Imperial times, is to be associated with the western rather than eastern sphere of the Roman world, and as such may be considered an interesting product of its environment.[13]

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[9] *Archaeologia* xxviii, 1840, pp. 1 ff., esp. pp. 5–6.

[10] Cf., *inter alia*, Arist. *Eccl.* 1030; *AM.* xviii, 1893, pp. 165, 179, 185; xxxiii, 1908, p. 429; von Duhn, *Italische Graeberkunde* i, 1924, p. 599. The custom of making funeral wreaths is too generally known to discuss; cf., *inter alia*, Arist. *Eccl.* 538; *Lys.* 602; frag. 445 a D. Euripides *Tro.* 1144; *Phoen.* 1632; Plut. *Pericles*, 36; Lucian, *de luctu*, 11, among ancient writers. For individual finds, cf. list by D. M. Robinson in *Olynthus* x, 1941, "Metal and Minor Miscellaneous Objects," p. 158; xi, 1942, "Necrolynthia," pp. 201–202; von Duhn, *op. cit.* i, pp. 381, 618; ii, 228, 311, n. 10; 316, 335, n. 7.

[11] H. Marzell, *Die heimische Pflanzenwelt in Volksbrauch und Volksglauben*, Leipzig, 1922, p. 46, referring to Wolf, *Beitrage der deutschen Mythologie* i, 1852, p. 213; Mannhardt, *Wald-und Feldkulte* i, 1904, p. 287.

[12] Hoffman-Krayer, Bäibtold-Stäubli, *Handwörterbuch des deutsche Aberglaubes* i, 1927, p. 1695.

[13] As Prof. Rostovtzeff has suggested to me, the date and provenance of the wreath must be considered tentative. There may be metal, terracotta, or painted representations of box from South Russia, Alexandria, or elsewhere in the East; or evidence for the use of actual box. I have not discovered such evidence in E. Breccia's "Ghirlandomania Alessandrina", (Musée égyptien iii, 1915, pp. 13–25, pls. VI–XXI, a reference given me by Prof. Rostovtzeff); his *Necropoli di Sciatbi*, (Musée d'Alexandrie, Catalogue général des antiquités égyptiennes, Cairo, 1912, esp. pp. 38–43, 163–169, 184–5, pls. XXXV–XLV, LXXVI–LXXVII, LXXXI); or in *CR.* (esp. 1880, pp. 57–60, pls. II–IV). But many of the wreaths discovered are not described in detail, and for certainty one would have to study the actual objects.

THE BRONZE STATUE FROM ARTEMISION

THE artistic merit of the bronze statue from Artemision will neither increase nor diminish by whatever name we agree to call it. Yet the proper identification of the statue, we believe, will make possible its attribution, and this, in turn, will help to elucidate the shadowy figure of at least one sculptor of the Transitional period to which the statue belongs. Consequently, its proper identification is of paramount importance. The loss of the object held in the clenched right hand, by which the figure originally could be identified, and the rather general type of the figure itself make the task of this identification difficult.

Shortly after the recovery of the statue, George P. Oekonomos recognized in it Zeus hurling the thunderbolt.[1] Christos Karouzos, in his final publication of the statue,[2] accepted it without reservation as a figure of Poseidon. H. G. Beyen, in his premature book on the Artemision bronze, reached the same conclusion.[3] Carl Blümel believes that the identification of the statue is impossible, and Julius Jüthner, in the most recent study on the bronze,[4] has tried to prove that our figure is not a god at all, but an athlete who was victorious in the pentathlon. Others have accepted the views of the scholars mentioned without taking an active part in the discussion.[5] In the present study we propose to reconsider the evidence available and the views expressed, with the purpose of reaching, if possible, a definite conclusion on the matter. Jüthner's identification must be considered first, since if it were proved correct, it would eliminate the arguments of Oekonomos, of Karouzos, and of all other scholars who maintain that the statue represents a god.

The size of the statue [6] and its divine appearance have contributed to the belief that it represents a god. Jüthner, rejecting this belief, remarked that other athletic statues were over life-size, and that a victorious athlete was considered almost equal to the gods and was awarded a divine status. Neither of these statements agrees with the evidence available to date, as we have demonstrated in our study on "Athletic Honors in the Fifth Century," *CJ.* xxxix, 1944, pp. 278–289. To the arguments enumerated in that study we may add here an additional piece of evidence: the bearded features and the age of the person represented. Certainly an idealized athlete, who, according to Jüthner, was considered ἰσόθεος, would have been represented as youthful and strong in the prime of his life, and perhaps beardless. It cannot be maintained that in the matter of age the sculptor suddenly became very naturalistic, because we know of very few athletes who continued to be victorious after they had reached ripe maturity, and perhaps only one of these was a pentathlete.[7] "'Εν γὰρ τοῖς 'Ολυμπιονίκαις," teaches Aristotle on the matter: "δύο τις ἂν ἢ

[1] George P. Oekonomos, *Praktika of the Academy of Athens*, 1928, pp. 750 ff.

[2] *Deltion* xiii, 1930–1931, pp. 40–104.

[3] *La statue d'Artemision*, La Haye, 1930.

[4] *AM.* lxii, 1937, pp. 136–148.

[5] F. Noack, *Antike* v, 1929, pp. 214 ff.; R. Herbig, *Gnomon* v, 1929, pp. 636 ff.; E. Buschor, *Die Plastik der Griechen*, Berlin, 1936, p. 75; C. Picard, *Manuel d'Archéologie grecque* ii, p. 64.

[6] The statue is 2.10 m. in height.

[7] The outstanding athlete with a long victorious career was, of course, Milo, the wrestler from Kroton. His first victory at Olympia took place in the sixtieth Olympiad, and his last (the sixth) in the

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FIG. 1.—THE BRONZE STATUE FROM ARTEMISION

τρεῖς εὗροι τοὺς αὐτούς, νενικηκότας ἄνδρας τε καὶ παῖδας, διὰ τὸ νέους ἀσκοῦντας ἀφαιρεῖσθαι τὴν δύναμιν ὑπὸ τῶν ἀναγκαίων γυμνασίων."[8]

The size of the statue and its appearance would indicate, we believe, that the person represented is a god and not an athlete. This is also indicated by a study of the statue itself (figure 1). The position of the right arm and the way in which the fingers of the right hand were rendered were considered by Jüthner as proofs that the statue was that of an athlete victorious in the pentathlon of men. The curved forefinger suggested to him, and as a matter of fact previously to Beyen,[9] the *ankyle* by means of which a spear was usually thrown in antiquity. The position of the feet and the easy way in which the figure is stepping forward are taken to indicate the transition from the inactive position to the run. Jüthner and Gardiner have successfully established the steps which preceded the throwing of the javelin.[10] First, one or two fingers had to be passed through the *ankyle*, as illustrated on the red-figured kylix in Berlin (fig. 2, 1). Then the blunt end of the javelin was pressed by the fingers of the left hand until the thong was drawn tight and the two supporting fingers were also stretched backwards, as indicated in fig. 2, 4, from a red-figured bowl in the Metropolitan Museum. Then the left arm was projected to balance the stance, as indicated in our fig. 2, 2, from a red-figured stemless cup (2728) in Berlin; and this was followed by the forward movement of the athlete and the throw. According to Jüthner, the first and the second stages of throwing the spear had been completed by the athlete of our statue, who is represented in the third stage.

The relative position of the fingers in the *ankyle* of the person hurling a spear is of great importance to our problem. The position is established by a great many representations which are in accord with each other. On the Panathenaic amphora at Leyden (fig. 2, 5), we have a representation of a spear-hurler aiming at a target. The *ankyle* has been stretched back and is kept by *two* stretched fingers, one of which is passed through the loop. *Two* fingers stretched backwards are clear in the

sixty-sixth Olympiad. His first victory, in the sixtieth Olympiad, was in the contest of boys. The time when an athlete was not considered a boy, but a man, and had to compete with men, is indicated by a passage in Pausanias (vi, 14, 2), from which we learn that Nikasylos, the Rhodian, was not allowed to compete with boys when he was 18 years old. Milo, therefore, must have been at the most 40 years of age when he won his last victory at Olympia; and his was the longest athletic career on record. The wrestler Hipposthenes of Sparta also had a long career of victories from the thirty-seventh to the forty-third Olympiad. Chionis of Sparta, a runner, is the third outstanding athlete, with 7 victories in 4 consecutive Olympic festivals (Olympiads 28–31). Gorgos, the Elean, was the only one who had the rather unbelievable record of 4 victories in the pentathlon, one in the double race, and one in the armed race (Pausanias vi, 15, 9).

[8] *Politeia* viii, 4, 1. In the *Wasps* of Aristophanes (vv. 1190 ff. and 1382 ff.) the old man Ephoudion is cited as contesting with the younger Askondas. But in the scholia we find that even in antiquity some believed that this extraordinary feat of valor was created by the poet ἐπὶ παιδιᾷ. The only representation of an older man taking part in an athletic event known to me is to be seen on a Panathenaic amphora from Vulci, now in the Castle Ashley Collection. An old man is to be seen among youthful contestants in the event of the dolichodromos, but, as Beazley, who described the race, remarked, "his efforts do seem rather pathetic as he endeavors to keep up with his younger and more vigorous rivals." (*PBSR.* xi, 1929, pp. 12–14, fig. 7). In the impressive list of people known for their longevity, which Miss Richardson compiled, there is but one athlete, Euthymos the boxer, who lived to an advanced age (B. E. Richardson, *Old Age Among the Ancient Greeks*, Baltimore, 1933, pp. 215–230).

[9] *Op. cit.*, p. 7. [10] E. N. Gardiner, *Athletics of the Ancient World*, Oxford, 1930, pp. 174–175.

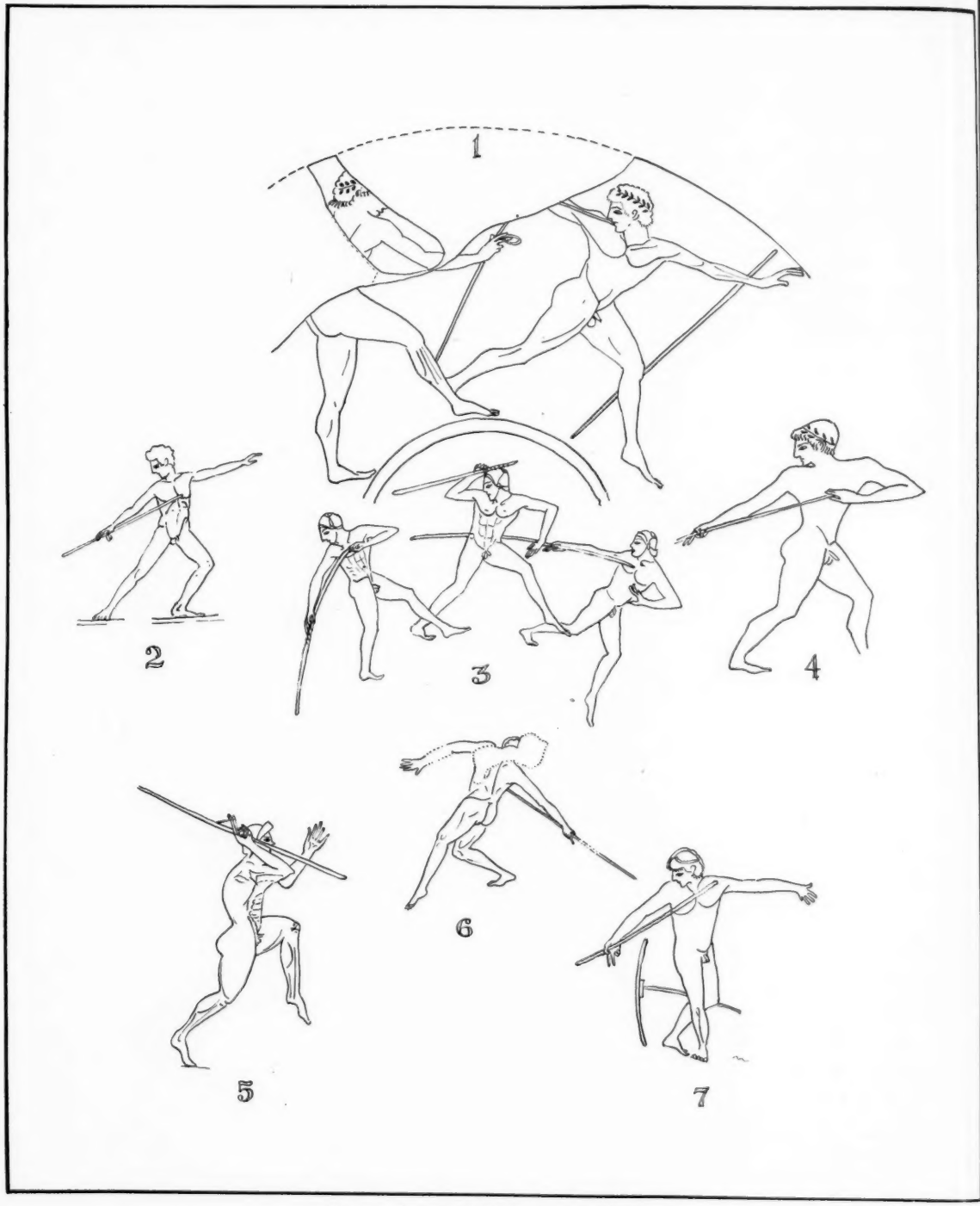


FIG. 2.—ATHLETES THROWING THE JAVELIN

1, 2, 3, 5, 6, 7, from *JHS.* xxvii, 1907, pp. 263, 268, 262, 260, 264, 266, respectively
4, from Richter, *Red-Figured Athenian Vases* ii, pl. 3, 5

representation of a spear-thrower on the Panathenaic amphora B 134 of the British Museum. The same position and number of fingers are to be seen in the representation of the spear-thrower on the red-figured kylix 562A in Munich (fig. 2, 3); on the red-figured amphora E 256 of the British Museum, and in practically all the other representations known to me.[11] The only doubtful exception is to be found on the red-figured kylix 270 (148) in the Torlonia collection (fig. 2, 6).[12] The Torlonia hurler seems to have but one finger stretched out beyond the shaft of the spear. In that example, however, the hand grip is not entirely clear and the existence of a thong is doubtful. The use of the two fingers and their position are illustrated in the drawing published by Jüthner and Gardiner and reproduced in our fig. 3, 1–3.[13] If we turn to our statue and study its right hand (fig. 3, 4–6), we shall find that only the forefinger is separate from the rest, and it is represented in a very relaxed attitude, which contrasts very sharply with the two extended fingers of the spear-thrower.

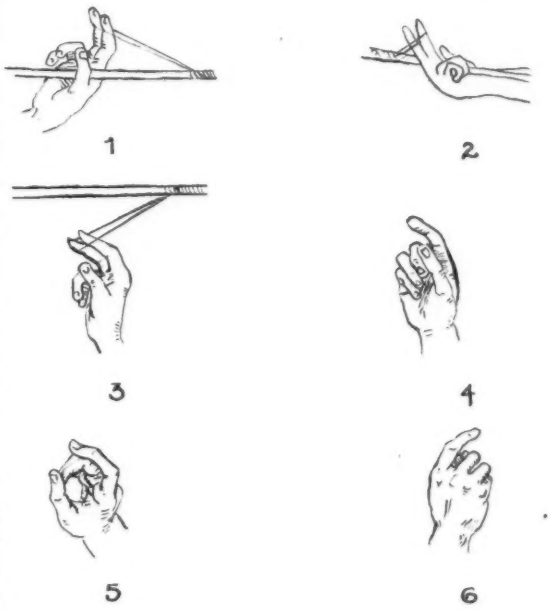


FIG. 3.—1, 2, 3: RIGHT HAND OF JAVELIN THROWERS USING THE ANKYLE (from *JHS.* xxvii, 1907, p. 257, fig. 4)
4, 5, 6: RIGHT HAND OF THE ARTEMISION BRONZE (from Karouzos, *op. cit.*, figs. 5–8)

It has been pointed out by Gardiner that athletes throwing the javelin for distance kept their heads turned backwards and fixed their eyes on the hand holding the *ankyle* until the moment of the throw.[14] This position is illustrated by our drawings 2 and 7 of figure 2, and can be seen in a great number of red-figured compositions. This position contrasts sharply with that of our statue, which holds the head turned toward the direction of the throw. In black-figured compositions, such as that on a Leyden amphora (fig. 2, 5), and in some early red-figure representations, athletes are pictured holding the javelin level with the head, with the left hand swinging backwards, and with the head turned in the direction of the throw.[15] Athletes so represented, however, are hurling their spears at a target. Their stance certainly is different from that of our statue, although their

[11] I had the privilege of studying the rich collection of photographs belonging to Professor W. A. Oldfather, of the University of Illinois, and in all instances, which are too many to enumerate, the two fingers are used in handling the *ankyle*. For this privilege I am indebted to Dr. Oldfather.

[12] Gardiner, *op. cit.*, p. 146, fig. 174; Jüthner, *Über Antike Turngeräthe*, Wien, 1896, fig. 49.

[13] Gardiner, *op. cit.*, fig. 141.

[14] *Idem*, p. 175.

[15] Cf., for instance, the hunters throwing the javelin against their prey on the François vase, Gardiner, *op. cit.*, fig. 138, and *JHS.* xxvii, 1907, p. 253 and fig. 3.

heads are turned toward the direction of the throw. The head turned and kept back is essential for distance throwing, characteristic, therefore, of the stance of a pentathlete. Yet our statue is represented with the head facing in the direction of the throw.

The position of the forefinger of the right hand and the turn of the head prove definitely that our statue does not represent a pentathlete. It represents a figure with a missile which is to be hurled at a definite target. Hurling at a target was not a part of the contests held at the national festivals so far as we know, and consequently our statue cannot represent an athlete who was victorious at that exercise. If it does not represent an athlete, it must, because of its size and appearance, represent a god, and, if so, it must represent either Zeus or Poseidon.

Jüthner has maintained that there is no representation of Zeus the hurler which exhibits a loose grip of the hand. But Zeus is represented exactly in this way, with a loose grip and the half-bent position of the arm, on an almost contemporary red-figured crater by the "Altamura painter" in the Louvre.[16] The eagle on the outstretched left hand leaves no doubt as to the identity of the bearded figure on the vase. In this red-figured composition, and in our statue, Zeus does not grip his missile nervously. He is balancing his weapon preliminary to throwing. That this stage in the hurling of the spear was common and essential is proved not only by artistic, but also by literary evidence. We have only to recall the many descriptions of warfare preserved in the *Iliad*. The actual throw of the spear is always preceded by a pause and a balancing of the missile. "He spoke and *poised* his far-shadowing spear and hurled," [17] is a very common line in epic poetry. Vase-paintings illustrate two distinct grips in the wielding of the spear: the one used for balancing or poising the weapon, preliminary to hurling it; the other used for striking at close quarters.[18] It is apparent that the former grip is illustrated by our statue. The god is not going to strike with his weapon, nor as yet is he ready to throw it, but he is balancing the weapon preliminary to throwing it. We must now note that Poseidon does not hurl his trident, but strikes with it, while Zeus is pictured both in art and in literature as hurling his thunderbolt. If our statue represents a god, it must represent Zeus the "τερπικέραυνος." That Zeus was conceived as a lancer is indicated by the passage in the thirteenth Olympic ode of Pindar, where he is called "ἐγχεικέραυνος." Eustathios has preserved the explanation of this adjective: "οὕτω καὶ ὁ Ζεὺς νῦν ἔχει στεροπὴν μετὰ χερσὶ καί τι βέλος. ᾧ λόγῳ καὶ ἐγχεικέραυνον αὐτὸν ἡ λυρικὴ Μοῦσα καλεῖ, ὡς οἷα καὶ δόρατι χρώμενον αὐτῷ, καθὰ δηλοῖ καὶ ὁ φράσας ὅτι ἐναγκοινεῖται ὁ Ζεὺς κεραυνὸν ὡς ἐν σχήματι αἰχμητοῦ πολεμησείοντος." [19] Hence the translation, "Zeus, whose lance is the thunderbolt," is

[16] This was again published by A. Merlin, "Le Zeus fulminant du Peintre d'Altamura" in the *Mon Piot.* xxxv, 1935–1936, pp. 73–92. Merlin also pointed out that on the other side of the crater Poseidon is represented gripping his trident in a stance which must have been typical of the times and of the god. That stance is entirely different from that of our statue.

[17] *Iliad* v, 280; vii, 244; xvii, 516; xx, 438; xxii, 273, etc.

[18] Cf. Ernst Pfuhl, *MuZ.* iii, figs. 117, 163, 232, 377, 403, 507, etc.; G. Richter, *Athenian Red Figured Vases*, New Haven, 1936, pls. 97, 99, 136, 144.

[19] *Ol.* 13, 77. See also *Pyth.* 4, 144; Eustathios' comment *ad Il.*, p. 839, 9ff. (*Il.* ii, 184). Cf. Cook. *Zeus* ii, pp. 704–705.

correct. And Zeus the hurler is a common plastic conception in the Archaic and Transitional periods. In most cases the god is represented in the very act of hurling his thunderbolt; the Zeus of Berlin is one of the better known examples of this, the first type (fig. 4, 1).[20] But in other examples, Zeus is represented balancing his thunderbolt; a statuette from Olympia (fig. 4, 2), perhaps the statuette at Princeton, and our statue from Artemision are examples of this second type.[21]

Our discussion thus far has proved, we believe, that Jüthner's arguments are not correct; that the Artemision bronze cannot represent a pentathlete; that it represents a divine hurler, and evidently Zeus.

The absence of the eagle, which we might expect to find on the extended left hand of the god, has been used against its identification as a figure of Zeus.[22] It is a well known fact that in the Transitional period there existed a type of Zeus brandishing the thunderbolt and holding the eagle in his extended left hand. The Ithomatas Zeus of Hageladas, as represented on numerous Messenian coins, is a famous example of this type.[23] The type could further be illustrated from the small bronzes of Olympia (fig. 4, 4), from coins of Olympia, by a statue on that site mentioned by Pausanias,[24] by the statuette of Ambracia,[25] and those from the sanctuary of Mount Lykaion.[26] But alongside this well known type with the eagle, there seems to have existed a second type, similar to the first with the exception of the eagle, which was omitted. Examples of this second type are not very numerous, but they exist. In the National Museum at Athens there is a statuette from Dodona of Zeus brandishing the thunderbolt, but without the eagle (fig. 4, 3).[27] A second statuette from the same site, now in Berlin (fig. 4, 1), illustrates the second type.[28] A third statuette, in a private collection, published by Langlotz, does not have the eagle.[29] The omission of the bird is not extraordinary, because we have a number of compositions in which the eagle is omitted. In sculpture, for example, we may recall the composition of the west pediment of the Temple of Artemis at Corcyra, in which Zeus is represented hurling the thunderbolt against a fleeing giant.[30] The eagle is

[20] K. A. Neugebauer, *Antike Bronzestatuetten*, fig. 28; W. Lamb, *Greek and Roman Bronzes*, New York, 1929, pls. 54a and 149.

[21] *Olympia* iv, pl. VII, 43. It seems that the statuette at Princeton belongs to this type (G. Elderkin, *AJA.* xliv, 1940, pp. 225–233).

[22] Karouzos, *op. cit.*, p. 47.

[23] B. V. Head, *HN.*², p. 431, fig. 236; p. 432, fig. 237; P. Gardner, *Types of Greek Coins*, pp. 156, 159; Imhoof-Blumer and P. Gardner, *Numismatic Commentary of Pausanias* ii, 67, pl. 84.

[24] Pausanias v, 22, 5. Apparently this was the statue represented on the Olympian staters. Cf. E. Babelon, *Monn. gr. rom.* ii, i, 885 ff.

[25] K. Rhomaios, Δελτ. 1920–1921, Parartema, pp. 169 ff. and figs. 3–6, now in the National Museum at Athens, no. 14984.

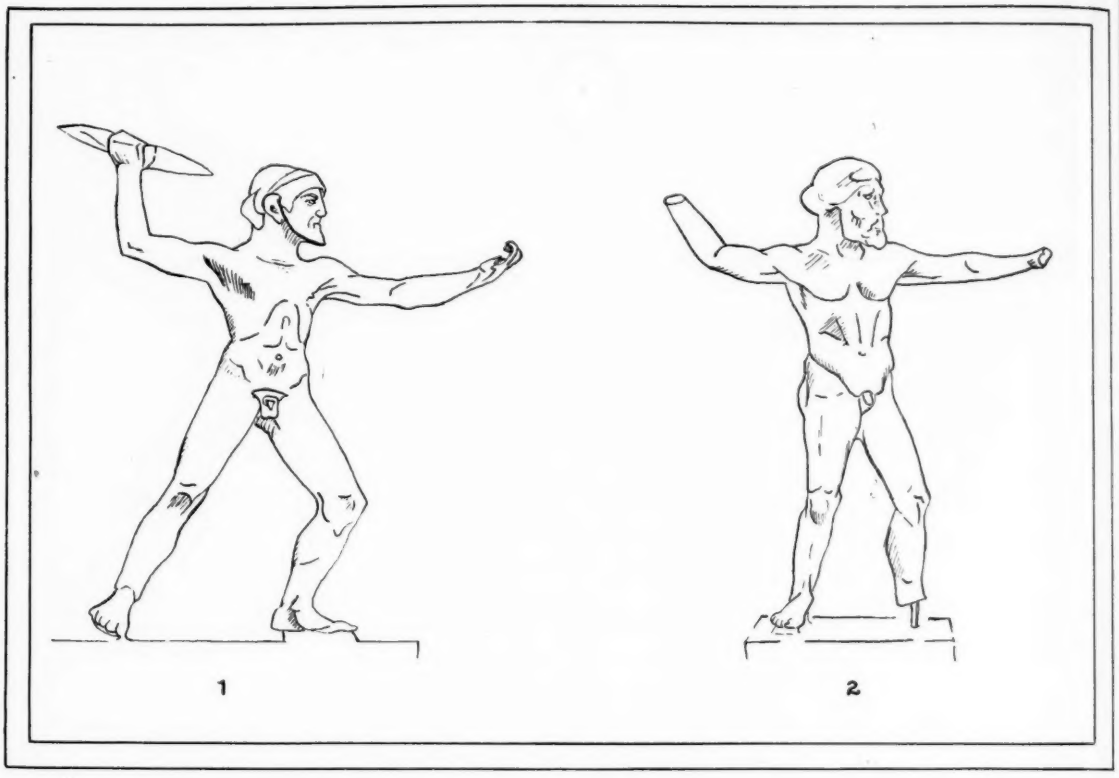
[26] K. Kourouniotes, Εφ. 1904, pp. 180, 185, and figs. 8–11. Cook, *Zeus* i, pp. 84 ff. and 89; ii, pp. 739 ff., gives a full description of all such statuettes.

[27] C. Carapanos, *Dodone et ses ruines*, Paris, 1878, pls. 12, 4. Now in the National Museum at Athens, no. 31.

[28] Cf. supra, note 20. No traces of an eagle are to be seen on the extended left hand of the Berlin statuette. The turning up of the edge of that hand apparently was caused by pressure on the extended fingers. It is a well known fact that in early bronze statuettes the extended fingers were made long and thin and could easily bend under pressure. (Cf. the armed runner at Tübingen, Neugebauer, *op. cit.*, fig. 31; Lamb, *op. cit.*, pl. LI, c.)

[29] Langlotz, *Fruehgriechische Bildhauerschulen*, pl. 27b, reported to have been found at Mantineia.

[30] Rhomaios, *BCH.* xlix, 1925, pp. 190–218; Δελτ. 1915, Parartema 79, 1920–1921, pp. 165 ff.; *AA.* xxix, 1914, pp. 130 ff.; *AM.* xxxix, 1914, pp. 164 ff., etc.



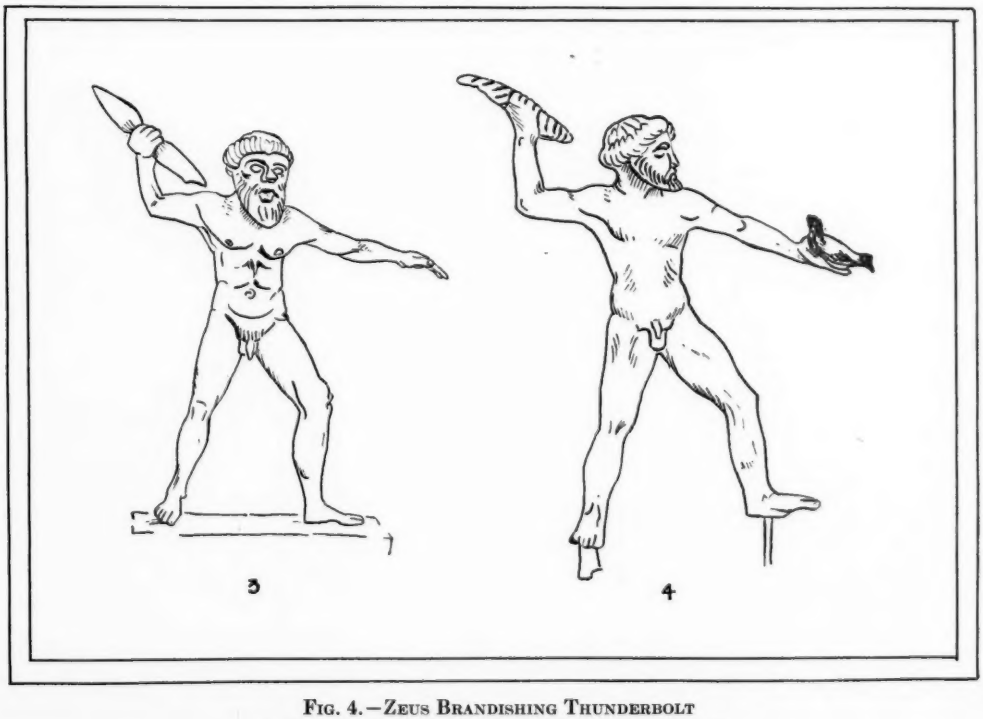


FIG. 4.—ZEUS BRANDISHING THUNDERBOLT

1. From Dodona, in the Staatliche Museum, Berlin
2. From Olympia, in the National Museum, Athens
3. From Dodona, in the National Museum, Athens
4. From Olympia, in the National Museum, Athens

omitted in that composition. On a stele from Katsighri, near Nauplia, we have Zeus with left hand extended and with the right brandishing a thunderbolt, but with no eagle.[31] Even on vase-paintings the eagle is not a constant companion of Zeus. On the well known Chalcidian hydria in Munich, dating from the middle of the sixth century, on which Zeus is represented rushing against Typhon with a thunderbolt in his right hand, the eagle is omitted.[32] The three sons of Kronos are represented on the kylix of Xenocles from Vulci. Zeus is identified by the thunderbolt, but his eagle is not represented.[33] The bird is omitted in a number of red-figured representations of the activities of Zeus; for example, on the well-known fragments of a stamnos in the Louvre attributed to the "Kleophrades' painter" and representing a scene from the Aithiopis of Arktinos, Zeus is drawn with a thunderbolt but without the eagle.[34]

On the other hand, Poseidon also seems to have a secondary attribute besides the trident which is his chief symbol. This was his sacred fish, sometimes a dolphin and sometimes a tuna fish. Poseidon is holding a trident in one hand, a fish in the other, on the Würzburg hydria;[35] and again, he is holding a dolphin on a skyphos by Makron on which the mission of Triptolemos is represented.[36] On that same skyphos we also have Zeus with a thunderbolt, but without the eagle. If we believe that the Artemision statue represents Poseidon, and that its artist intentionally omitted the fish of that god, how could we maintain that it was impossible for him to omit the eagle if he wanted to represent Zeus, especially since the bird is so often omitted in the representation of the Father of Men and of Gods?

If we now turn to our early literary tradition, we shall find that the thunderbolt and the aegis, not the eagle, are the attributes of Zeus. In the *Iliad* the eagle is a "bird of omen," the "surest of omens," but not a constant companion and an emblem of Zeus. When Zeus left Olympos,

> Ἴδης ἐν κορυφῇσι καθέζετο πιδηέσσης
> οὐρανόθεν καταβάς· ἔχε δ'ἀστεροπὴν μετὰ χερσίν.[37]

The eagle is not even mentioned. When an eagle dropped a writhing snake in the middle of the Trojans, and Polydamas, explaining the omen, advised not to attack the ships of the Danaans, Hektor replied:

> τύνη δ'οἰωνοῖσι τανυπτερύγεσσι κελεύεις
> πείθεσθαι, τῶν οὔτι μετατρέπομ' οὐδ' ἀλεγίζω . . . . .
> ἡμεῖς δὲ μεγάλοιο Διὸς πειθώμεθα βουλῇ.[38]

Certainly this plainly indicates that the eagle was not associated as yet with Zeus. Again, in the Odyssey Zeus sent for Telemachos "two eagles to fly from aloft," who

[31] I. Kophiniotes, in Ἀθηνᾶ ii, 1890, p. 695, and in 1890, p. 476; Svoronos, *Ath. Nationalmuseum*, pl. 219 d; Cook, *op. cit.* ii, p. 32.

[32] *FR.* i, pls. 31 and 32c; E. Buschor, *Greek Vase Painting*, pl. xxxiv; A. *Rumpf*, *Chalkidische Vasen*, pl. xxv.

[33] Now in the British Museum, B425, *Catalogue* ii, 223. Hoppin, *Black-Figured Vases*, p. 420, with bibliography.

[34] Hoppin, *Red-Figured Vases* ii, 147, with bibliography. The eagle is omitted in the numerous representations of Zeus pursuing a fleeing woman, presumably Semele. Cf. Cook, *op. cit.* ii, pp. 24–29.

[35] Karouzos, *op. cit.*, p. 54.

[36] Pfuhl, *op. cit.* iii, fig. 437; Gerhard, *AV.* pl. II, 1.

[37] *Iliad* xi, 184.

[38] *Iliad* xii, 237 ff.

tore each other over the people of Ithaca in assembly convened. One of the suitors, Eurymachos, son of Polybos, in answer to the explanations of Halitherses, exclaims:

ὄρνιθες δέ τε πολλοὶ ὑπ' αὐγὰς ἠελίοιο
φοιτῶσ', οὐδέ τε πάντες ἐναίσιμοι· . . . . .[39]

No special significance is attached to the fact that the birds were eagles. In Hesiod, Zeus is pictured as ruling over Olympos ἔχων βροντήν, ἠδ' αἰθαλόεντα κεραυνόν. When Zeus fought against the giants, he took

βροντήν τε, στεροπήν τε, καὶ αἰθαλόεντα κεραυνόν
κῆλα Διὸς μεγάλοιο . . . . .[40]

The eagle is not even mentioned. It is stated that it was perched on the scepter of Zeus in the much later *Pythian Ode* i of Pindar, and so it was represented in the famous chryselephantine statue of Pheidias for the temple at Olympia. Even Pindar, however, does not state that the eagle was considered the emblem of Zeus. For him, too, the eagle was ἀρχὸς οἰωνῶν. It seems safe to conclude, therefore, that in our earlier literary traditions the eagle was not considered an attribute and emblem of Zeus. Perhaps it is interesting to note that these earlier literary legends represent the traditions of Northern Greece.

George W. Elderkin, in a recent article, has suggested that the "representation of Zeus with a thunderbolt in the right hand and an eagle on the outstretched left hand seems to have appeared first in the Peloponnesos in the sixth century,"[41] and this suggestion seems to be in accord with available evidence. Perhaps it originated in Arcadia and in the Lykaian sanctuary;[42] for the eagle seems to be the constant companion of Zeus Lykaios, whose worship in the Lykaian sanctuary was one of the foremost and one of the most ancient mountain cults of the god in the Peloponnesos. The bird is not only represented in the statuettes of Zeus discovered at Mount Lykaion, but eagles were stationed in front of the east side of the great altar of Zeus, a primitive altar indeed, in the shape of a mound of earth.[43] From the Lykaion, perhaps, the use of the eagle as an attribute of Zeus passed to Olympia, where we find the bird represented on the statue of the Metapontines mentioned by Pausanias, and on the coins of Olympia.

It becomes apparent from the above that in the early fifth century there existed two different artistic types of Zeus in the attitude of hurling the thunderbolt, one without, and another with the eagle. The first is illustrated by the statuettes from Dodona (fig. 4, 1, 3) and by the bronze of Artemision, and the second by the statuettes and representations from the Peloponnesos and the Peloponnesian workshops (fig. 4, 4), and especially from the Lykaion sanctuary and Olympia. The first type

[39] *Odyssey* ii, 181–2.

[40] *Theogony* 71, 504, 707–708, 853–854. The term αἰγίοχος is a constant attribute of Zeus both in Homer and Hesiod.

[41] "Bronze Statuettes of Zeus Keraunios," *AJA.* xliv, 1940, pp. 225–233.

[42] This I am trying to prove in "The Lykaean Altar of Zeus." *Classical Studies in Honor of William Abbott Oldfather*, Urbana, 1943, pp. 122–133.

[43] *Pausanias* viii. 38, 7. That the birds were significant in the rites of Lykaian Zeus is indicated by the description of the sanctuary of the god at Megalopolis, where two (stone?) eagles were still to be seen in the time of Pausanias (viii. 30, 2).

apparently conforms with the traditions of northern Greece as preserved in our earlier literary sources; since its examples were found in northern Greece, we may be allowed to call it the northern type. The second, originating in the Peloponnesos, is our southern type. The absence of the bird in a statue like that of Artemision would only indicate that its artist followed the northern type, and this will conform to the locality in which the statue was found. Whether we believe in this division of types or not, the fact will still remain that the absence of the eagle does not necessarily imply that the Artemision statue does not represent Zeus.

The object held in the right hand of the statue is lost, but its relation to the composition is determined by the circular opening of the hand. Karouzos has placed in that hand not a trident, but the shaft of a trident, which passes directly in front of the face of the god, dividing it into two unequal parts (fig. 5). He has justified this bisection by maintaining that the god was unconscious of spectators.[44] But certainly the spectators were conscious of the appearance of the statue; and if the sculptor in working this masterpiece took such great pains to emphasize a dominant view to be enjoyed by the spectator,[45] how can we assume that he would have disregarded the visual disadvantages which would follow the placing of the shaft in front of the head? As a matter of fact, even the engravers of the coins of Poseidonia felt very keenly the awkwardness of this arrangement and forced the shaft of the trident behind the head of the god (fig. 6, 2).[46] If the engravers, for aesthetic reasons, avoided placing the shaft in front of the face, we have a right to believe that an artist of the ability and sensitiveness of the carver of the Artemision bronze would not have attempted such an arrangement.

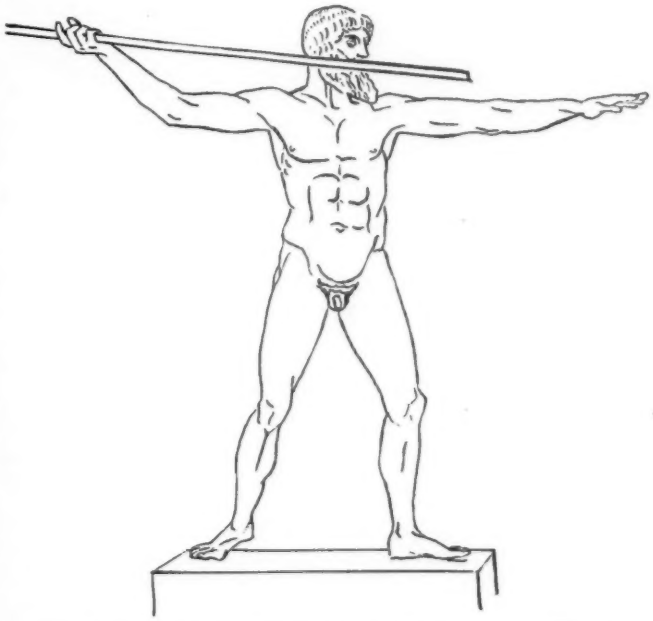


FIG. 5.—THE ARTEMISION BRONZE WITH A MISSILE. AFTER KAROUZOS, FIG. 9

[44] *Op. cit.*, fig. 9 and p. 51.

[45] This is proved by the efforts of various scholars to establish the correct view of the statue, and the unequal aspect of the bronze, by aesthetic values, when seen from different angles.

[46] Cf. Head, *op. cit.*, p. 80 and figs. 41, 42.

It is true that in some pedimental compositions parts of one member are hidden behind those of others, and weapons are made to cross the bodies of warriors. The pedimental compositions of Aegina and those of the western pediment of Olympia are well known examples of such arrangements. We must remember, however, that the warriors of Aegina and the Apollo of Olympia are but a part of a larger composition, each member of which has to carry its burden of the common action. They are not isolated figures. In spite of that, the force of the gesture of Apollo and its aesthetic appeal is not minimized by the position of Peirithous. In fact, in that way the meaning of the gesture is emphasized, and the contrast of the raised right hand and of the stretched and rigid left, that strikes the spectator who sees the statue by itself, is eliminated in a masterful way. In the excellent photograph of Hege of the reconstructed western pediment, we can feel the strength which is imparted by the invisible god to the blow which Peirithous is ready to lower on the head of the leader of the Centaurs [47]—the decisive blow on which dramatically are centered the possibilities of the conflict. Again we can feel the strength which flows from the wondrous hand, the divine strength which goes beyond Peirithous to every fighting lapith, which will bring ultimate victory to the wronged party. It is interesting to compare Rodenwaldt's restoration with that suggested recently by Fritz Weege in Dörpfeld's *Alt-Olympia.*[48] Weege has restored the composition in such a way as to avoid the overlapping of figures and to exhibit the right hand of Apollo in all its extent. A glance at this restoration will prove that the gesture actually loses in force and in aesthetic meaning when the hand is shown in its entire length. The Apollo from Olympia seems to prove that the artists of that early period occasionally, and in large compositions, did place parts of one member in front of another, but they employed this means only when the aesthetic possibilities of their figures were increased by this device, and the effect of the action was strengthened.[49] Certainly we cannot maintain that either the aesthetic possibilities or the powerful action of our statue would be increased by placing the shaft across its face.

Poulsen has voiced the belief that the Artemision bronze is a cult statue.[50] If it is such a statue, it should be more properly compared with other cult statues about which we have more or less definite information. Those cult statues are unconscious of spectators, but their sculptors in creating them have taken into consideration the spectator's need of obtaining a full unmolested view of all details of the divine appearance.[51] Surely, we can expect that the same principle which governed the making of other cult statues would be present in our statue also.

We must now note that Karouzos placed only a shaft in the right hand of the god. If at the end of that wooden shaft we place its rightful heavy prongs, and try to balance the weapon, we shall find that these prongs will reach the plane of the face, while the shaft will project a good deal beyond the hand. On the coins from Poseidonia the prongs are beyond the face; but in those coins the god is represented grip-

[47] W. Hege and G. Rodenwaldt, *Olympia*, New York, 1936, fig. 20. [48] II, pl. 37.

[49] In the rendering of the warriors on the pediments of the temple at Aegina the artist has placed the spears of the fighters across members of their bodies as required by the composition. But he took exceptional care to show the figure of Athena in all its details.

[50] *Acta Archaeologica* 1937, pp. 139–140.

[51] We could, for example, compare our statue with the Athena Parthenos or the Zeus of Olympia.

ping vigorously the end of the shaft; he is not balancing his weapon. As a result, that position of the trident in the coin type is possible, but it is impossible in our statue. To allow the prongs of the trident to rest immediately in front of the face would certainly be an impossible arrangement, and yet this will be the case if we assume that the statue represents Poseidon balancing his trident. The god apparently held an object of smaller dimensions than a trident, which fitted in the space between the hand and the head. A thunderbolt, and not a trident, will fit the position and its limitations: a thunderbolt with a wooden shaft, which would fit in the hollow of the hand, and with, perhaps, applied bronze flame ends.[52]

We believe that the examination of the evidence provided by the statue itself definitely proves that the Artemision bronze represents not an athlete, but a god; not Poseidon, but Zeus. As a matter of fact, if we tried to establish the evidence upon which the identification of the statue as Poseidon rests, we should find that no such evidence has been advanced. The argument seems to be that for various reasons the statue is not that of Zeus, therefore it represents Poseidon. It is true that, so far as we know, the Artemision type could be equally well used for the representation of either god; but if instead of starting with Zeus, we begin with Poseidon, what evidence will compel us to recognize the ruler of the seas in our statue?

In the monumental sculpture of the Archaic and the Transitional periods the only type used for cult statues of Poseidon is that illustrated by the Livadostra bronze. The hands of that statue are missing, but in the usual restored composition the god is represented brandishing the trident with his right hand and holding a fish—a tuna fish or a dolphin—in his left.[53] A bronze statuette from Euboea, now in Munich, seems to indicate that this same type was still in use about 440 B.C.[54] This type is entirely different from ours, and no other contemporary plastic representation of Poseidon has survived. In later years the type with the god standing with one foot on a rock was developed, as well as the seated type, known especially from the coins of Tenos and of Thebes.[55]

It seems that the only evidence for the existence of a statue of Poseidon similar in type to that from Artemision is to be obtained from the coins of Poseidonia. Before we discuss the evidence derived from these coins we must emphasize one important relevant fact: namely, we cannot be sure in all cases that a coin type is directly copied from a plastic type, or that in all cases a figure represented on a coin proves the existence of a statue from which the figure was copied. On the Poseidonia coins—which were roughly contemporary with the Artemision bronze, or older in date—three varieties of figures of Poseidon are to be seen. In the first we have the god wearing a chlamys over his shoulders and wielding a trident ready to strike (fig.

[52] The lack of any traces of a metal shaft in the hollow of the hand would necessitate a wooden body. The argument of Jüthner that the artist would have cast the hand and the attribute in one piece at the same time has already been answered by Oekonomos, who pointed out the desirability of lessening the weight which was to be supported by the extended and therefore rather weak right hand. Cf. *MonPiot.* xxx, 1929, p. 23.

[53] Ἐφ. 1899, pp. 57 ff., pl. 5; Roscher, *Lex. Mythol.*, s.v. *Poseidon* iii, 2875, fig. 10; Karouzos, *op. cit.*, p. 54.

[54] Roscher, *op. cit.*, iii, 2877, fig. 12; *Münchner Jahrbuch*, 1907, p. 137.

[55] Head, *op. cit.*, p. 353, fig. 199, and p. 492, fig. 260.

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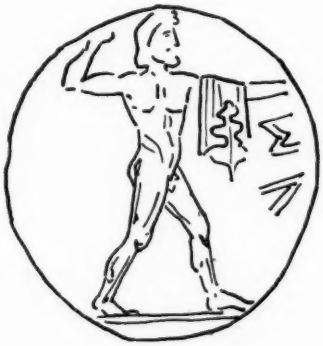

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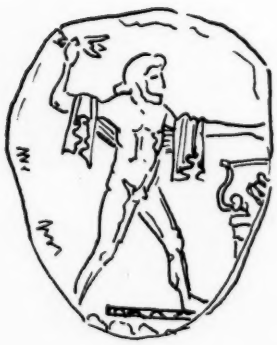

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FIG. 6.—GREEK COINS WITH ZEUS AND POSEIDON

1. From Messene (*BMC. Coins, Peloponnesus*, p. 110, pl. 22, 6)
2. From Poseidonia (Seltman, *op. cit.*, pl. x, 10)
3. From Sybaris (Hill, *Hist. Gk. Coins*, p. 51, fig. 3)
4. From Messana (Head, *op. cit.*, p. 154, fig. 82)
5. From Poseidonia (Garucci, *Mon. It. Ant.*, pl. 121, 29)

6, 2).[56] In the second variety the chlamys is again present, but now it is wrapped around the extended left hand; with the trident in his right the god is ready to strike.[57] In the third variety the god is entirely nude, brandishes the trident in his right hand, while a dolphin is represented below his extended left hand. Sometimes a wreath is placed on the extended left hand (fig. 6, 5).[58] Were these three types copied from three different monumental cult statues which existed in Poseidonia almost at the same time? [59] This seems very doubtful. It is more probable that the engravers of the Poseidonia coins borrowed the established type of Zeus hurling the thunderbolt and added to it the attributes of Poseidon—a chlamys, a dolphin, a wreath, changing them on the different series of their coins. Such borrowing was not uncommon; in Messana, for example, they used the head of the Syracusan Zeus Eleutherios for the Poseidon laureate.[60]

Some coins from Sybaris and from Messana will help in establishing the importance which can be placed on the evidence derived from coins of Poseidonia. On the obverse of some coins from Sybaris, dating from ca. 453–448 B.C., we find Poseidon brandishing a trident (fig. 6, 3); on their reverse a standing bull is represented.[61] The Poseidon of these coins is wearing a chlamys thrown over his extended left hand. Hill has rightly seen in these coins a combination of types, proving an alliance between Poseidonia and Sybaris.[62] Poseidon would be the emblem of the former city, and the bull that of the latter. If the Poseidon figures used on the coins of Poseidonia were derived from a plastic type, from a statue existing in that city, we would naturally expect the figure used on the coins of Sybaris to be nearer to the original plastic type. In that type, and in that assumed statue, the chlamys of the god is present.

From Messana we have a unique tetradrachm, apparently struck about the middle of the fifth century, when the old name Zancle was revived for a short time (fig. 6, 4).[63] On the obverse of this rare coin we have a god advancing to the left toward an altar. He is wearing a chlamys over his shoulders, is brandishing a thunderbolt in his right hand, and has extended his left hand in the direction of his movement. On the reverse we find the dolphin and the scallop-shell used by the Zancleans from a very early period. The god on this coin has been identified as Zeus and as Poseidon. Seltman has advanced the following very ingenious interpretation in an effort to explain the composition on the obverse.[64] "It was perhaps," he states, "at the expulsion of the tyrant in that year (461?) that the city decided for a brief period to resume its old name of Zancle and to issue coins with the old sixth-century dolphin type. But, probably with a view to conciliating the Messenian element in the population, the obverse of the tetradrachm bore a figure of Zeus Ithomatas, God of Ithome in Pelo-

[56] Head, *op. cit.*, p. 80, figs. 41–42; Seltman, *Greek Coins*, London, 1933, pls. x, 10; xviii, 2.

[57] P. R. Garucci, *Monete dell' Italia Antica*, Roma, 1885, pl. 121, 12; cf. our figure 6, 3, from Sybaris.

[58] Garucci, *op. cit.*, pl. 121, 29.

[59] This fact has been overlooked by Jüthner, who without qualification sees in the posture of the Artemision bronze a correspondence to the famous image of Poseidon in the temple at Poseidonia, as represented on the coins of that town. In view of the variety presented by the coins, we may ask again, which of the three Poseidons represented on the coins reproduces the cult statue?

[60] Head, *op. cit.*, p. 155; G. F. Hill, *Coins of Ancient Sicily*, London, 1906, pl. xii, 14.

[61] Head, *op. cit.*, p. 84, fig. 44. [62] Hill, *Historical Coins*, London, 1906, p. 51.

[63] Head, *op. cit.*, p. 154 and fig. 82; Cook, *op. cit.* ii, p. 794, fig. 757. [64] *Op. cit.*, p. 134.

ponnesian Messene, which at that very date was besieged by the Lacedaemonians. If we may regard this figure as a version of the actual statue of Zeus upon the mountain summit, and the altar in front of him as a symbol of the national hearth of the Messenian nation, then we have here one of the earliest coins with a device of a propagandist character. Messana-Zancle has just shed the tyrant's yoke: may Zeus of Ithome and his worshippers in Messenia likewise secure freedom." Of course, the value of this interpretation will rest on the assumed appearance of the old statue of Zeus Ithomatas. It is very possible to assume that in the Ithomatas Zeus by Hageladas were maintained the general type of the god and the attributes present in the older statue. If that were the case, then the type of the god represented on the coin differs from the statue in two very important elements. The eagle of the Ithomatas Zeus was omitted, and a chlamys was added in the coin type. In other words, an attribute of Zeus was replaced by one of Poseidon. Because of this interchange of attributes, it seems to us that the god on the coin should be identified as Poseidon. The god was given a thunderbolt instead of his trident and the general appearance of the Ithomatas Zeus "to conciliate the Messenian element in the population." We may even admit that the altar stood "as a symbol of the national hearth," but the dolphin and the scallop-shell of the reverse, as well as the chlamys on the obverse will certainly indicate that the god in question is Poseidon, the great god of Messana. The appearance on the coins of this god would have appealed to the larger native element in the population, since, as Cook has pointed out, Zancle was an ancient settlement of the Sikels, and consequently a national center of Poseidon worship.[65] It seems evident that the people of Messana-Zancle borrowed the type of the Ithomatas Zeus to represent their Poseidon, and if this was possible for the people of Messana, it was equally possible for the people of Poseidonia. No association with the great Messenian center was to be emphasized by the coins of Poseidonia, and so the god represented on those coins was given his trident. The extended left hand of Poseidon, as seen on the coins from Poseidonia, seems to indicate farther such a borrowing. That position of the hand is essential for hurling, but it is incompatible with striking if the person attacking does not carry a shield.[65] Poseidon, as represented on the most common coins from Poseidonia (fig. 6, 2), does not carry a shield. The realization of the absurdity of the position of the left hand perhaps forced the engraver to place a chiton over the left arm in the second variety of Poseidonian coins, and in the representations of Poseidon on coins of other cities and in later times. If we assume that the engravers of the Poseidonia coins borrowed the type of Zeus to represent their Poseidon, we can readily understand their extreme care, almost anxiety, to indicate by means of the dolphin, the chlamys, or of the inscription, that on their coins the Lord of the Seas was represented.

The discussion of the evidence to be derived from the coins of Poseidonia has made clear at least two points: first, these coins do not necessarily indicate the existence of a plastic type which their engravers have imitated; second, the types of coins prove

[65] *Op. cit.* ii, p. 795. The figure was accepted as Poseidon by Hill (*Historical Greek Coins*, p. 32, note 1), by Macdonald (*Coin Types*, Glasgow, 1905, p. 143), and with reservation by Head. Zeus hurling the thunderbolt is represented wearing a chiton in vase-paintings, but in the sculpture of our period he is always represented nude. For gods and warriors striking and holding a shield in the extended left hand, cf. Pfuhl, *op. cit.* iii, figs. 306–308, 312, 484, 504, 507, etc.

that a mantle is usually given to Poseidon, who is always represented with a trident firmly gripped in the right hand. The possibility is also indicated that the engravers of the Poseidonia coins had used the Zeus type in representing Poseidon. The lack of a mantle or a wreath and the loose position of the fingers of the right hand of our statue, we believe, are sufficient indications, proving that the Artemision bronze had no relation to the type illustrated by the Poseidonia coins, even if that type was copied from an existing plastic work, which is very doubtful.

We have to descend to the Roman Period for the next piece of evidence in our quest of a type of Poseidon which could be considered similar to that of our statue. The type of the head of the Artemision bronze is reproduced on a terracotta relief, now in the Glyptothek of Munich, which, with other reliefs, decorated the sunken panels of the ceiling of a Roman villa at Porcigliana.[66] This relief has been taken as additional evidence favoring the identification of the statue as a Poseidon. It is well known, however, that in later years it became customary to use the type of Zeus for the representation not only of Poseidon, but even of Asklepeios. How can we be sure that the artist of the terracotta relief in Munich was not following this custom, and was not, in fact, using the type of Zeus in his representation of Poseidon? That he had no difficulty in using one type for another is proved by the fact that in representing Omphale on a second relief, he used a female head-type of the Early Classical period, and this he covered with a lion skin. It is interesting to note that a trident was placed in the background of the Munich relief to the left of the head of Poseidon. It is evident that the artist, realizing that his figure could be taken for Zeus, that in fact it did represent Zeus, placed the trident there to indicate that Poseidon was represented in the panel. Because of this interchange and borrowing of types in which the artist of the Munich relief indulged so freely, it is not safe, to say the least, to base any conclusions on his work, and this was admitted even by Karouzos.

With the scarcity and almost non-existence of sculptured, painted, or even literary information favoring the identification of the statue as Poseidon, contrasts very sharply the wealth of evidence which seems to prove that in our statue we have Zeus. In the Homeric poems Zeus is the τερπικέραυνος, the hurler of the thunderbolt who delights in his missile. In the Hesiodic *Theogony* he is the warrior with the ἀιθαλόεις κεραυνός. We see him hurling his weapon in pedimental sculptures, in statuettes, in vase-paintings. In fact, in the Archaic and the Transitional periods the most common plastic type of Zeus is that represented by our statue, hurling the thunderbolt. We are now able to establish two types of Zeus the hurler: to the first belong examples in which the god is represented balancing his weapon preliminary to the hurling; to the second type belong examples representing the god in the act of hurling. Furthermore, each type is divided again into two by the existence or omission of the eagle. Representations of Zeus hurling the thunderbolt without the eagle seem to have formed a northern group, and were inspired by northern traditions. Representations in which the eagle is added appear to belong to a southern group, which seems to have originated around Mount Lykaion and Olympia. The discovery of our statue off the northern coast of Greece, which presumably indicates that

[66] Karouzos, *op. cit.*, pp. 99 ff. and fig. 3d; Furtwängler, *Beschreibung d. Glypt.*, p. 74, no. 62–66.

it was originally standing in some northern city of the Greek world, agrees with the results obtained from the discussion of the variations of the type.

In closing, we may add that the lack of any ruggedness, and the spiritual quality which emanates from the bronze, will again identify it as a Zeus. It will be difficult, in view of the evidence at hand, to formulate any other but the obvious conclusion, that the bronze from Artemision represents Zeus, the Father of Gods and of Men. The spectator who finds himself face to face with this masterpiece, will unintentionally remember the devout words of Aeschylos:

> Ἄναξ ἀνάκτων, μακάρων
> μακάρτατε καὶ τελέων τελει-
> ότατον κράτος, ὄλβιε Ζεῦ.
>
> (Ἱκέτιδες, 524–526)

The problem of assigning the statue to a sculptor will require a special study which we hope to complete in the near future. It is sufficient to state here that Kalamis, Hageladas, an unknown Boeotian-Argive sculptor, and Myron have been suggested.[67] I believe that the statue is not that of Ithomatas Zeus by Hageladas, but I believe that it must be attributed to the workshop of that great master. Even if we disregard the way in which the hair of our statue is rendered and the absence of the eagle, its discovery off the coast of Artemision will prevent us from suggesting that the statue is that of the Ithomatas Zeus by Hageladas. Alexander Robinson has tried to overcome this difficulty by suggesting that the boat in which the bronze was stored had started from the west coast of the Peloponnesos and was on its way to Constantinople when it was shipwrecked off the coast of Artemision.[68] We doubt that this explanation could be proved correct, because ever since the time of Nestor the regular routes between these two points were by way of the Cyclades and the islands off the coast of Asia Minor. We may recall that the old warrior was overtaken by Menelaos at Lesbos when he and his followers were debating the "long voyage, whether we should sail to seaward of rugged Chios, toward the isle Psyria, keeping Chios itself on our left, or the landward of Chios past windy Mamas." But the sign ordered them to follow an unusual course, to "cleave through the midst of the sea to Euboea—to Geraestos." [69] Artemision is as far off this most perilous and unusual course as the length of Euboea.

WASHINGTON UNIVERSITY GEORGE E. MYLONAS

[67] Karouzos, *op. cit.*, p. 93; Beyen, *op. cit.*, pp. 44–45; Poulsen, *Acta Archaeol.* xi, 1940, fasc. 1–3.

[68] In a paper read at the Forty-First General Meeting of the Archaeological Institute of America (Cf. *AJA.* xliv, 1940, p. 109). Now published in *AJA.* xlvi, 1942, pp. 73–76.

[69] *Odyssey* iii, 169 ff. It should also be noticed that with the statue were found some sherds which tentatively were placed in the Hellenistic period (Karouzos, *op. cit.*, p. 94). This, of course, would exclude Constantinople as the destination of the galley with its treasures.

THE PAINTERS OF "TYRRHENIAN" VASES*

PLATES III–VI

THE amphora illustrated on pls. III–VI,[1] is an excellent, if not the very best example of a certain quite distinctive class of Attic black-figured vases, the production of which was limited to the second quarter of the sixth century B.C.[2] The character and origin of this particular group were for a long time misunderstood and obstinately misinterpreted. Impressed by a rather superficial resemblance between these amphorae and the better known series of Corinthian vases, Pottier pronounced them "Attic influenced by Corinthian style." [3] Later, Holwerda created the dangerous hyphenated denomination Corinthio-Attic,[4] which was subsequently changed to Attico-Corinthian by Pottier without improving it.[5] Though both Pottier and Holwerda did good service in beginning to collect the widely scattered material, the foundation for a genuine understanding was not laid till Thiersch, in 1899, published a masterly study [6] of this group, in which he demonstrated, by careful analysis, the thoroughly Attic character of these vases and pointed out the absurdity of linking them with Corinthian style or technique.

Confronted with the misconception which was manifested in the terms Corinthio-Attic or Attico-Corinthian, Thiersch chose to re-use the name "Tyrrhenian," which Gerhard had first coined [7] and applied rather indiscriminately to a large number of vases which he could not place in his two chief categories, the Greek and the Etruscan styles. But by Thiersch's day, Gerhard's "Tyrrhenian" class had been stripped of almost all its members which had been placed in their proper connections till only Thiersch's vases remained. Thus "Tyrrhenian" had lost its original heterogeneous meaning. As Thiersch was in need of a convenient term to characterize the vases of his class, he decided to retain the misnomer "Tyrrhenian," after having purified and specified the range of its application. In his opinion, "Tyrrhenian" was a not entirely inappropriate designation for vases which were made largely, if not exclusively, for

* This paper owes much to the constant encouragement, patient interest, and stimulating criticism of Professor H. R. W. Smith. I am grateful to Dr. L. D. Caskey of the Museum of Fine Arts at Boston for permission to publish the excellent photographs of the Boston "Tyrrhenian." Miss G. M. A. Richter of the Metropolitan Museum in New York and the late Mrs. E. H. Dohan of the University Museum in Philadelphia have been most helpful in their generous hospitality. Dr. D. A. Amyx offered many valuable suggestions.

[1] Boston 98.916; see below, Timiades painter, no. 3.

[2] The second quarter of the sixth century is a more likely date than Scheurleer's half-century (570–520 B.C.), which he proposes in *Griechische Ceramiek*, p. 58.

[3] In Dumont-Chaplain, *Les céramiques de la Grèce propre* 1, 1888, p. 329.

[4] *JdI.* 5, 1890, pp. 237 ff.

[5] *Catalogue des vases antiques de terre cuite* 2, 1899, pp. 565–566 ". . . le mot 'attico-corinthien' nous paraît forte acceptable, en reliant l'une à l'autre les deux plus puissantes fabriques de la première moitié du vi[e] siècle." I know of only two vases which can safely be called "Attico-Corinthian": modern forgeries by the same hand, one formerly in the Untermyer collection (*Parke-Bernet, May 10–11, 1940*, p. 74, no. 111), the other in the Lederer collection. There the figure frieze is Attic, copied from Tarquinia RC 5564 (*Mon. ined.* 12, pls. 9–10); the animals are Corinthian.

[6] "*Tyrrhenische*" *Amphoren.* [7] *Annali* 1831, p. 10. Cf. Thiersch *op. cit.*, pp. 1–3.

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OF AMERICA

the Etruscan market.[8] But Thiersch's name was not a very happy choice. Not only was the term rejected by Pottier and his followers,[9] who quite unreasonably clung to the misleading term Attico-Corinthian, but its very ring—foreign and obscure—actually seems to have made some scholars believe that the vases are something un-Attic.[10] If used with quotation marks, though, "Tyrrhenian" can hardly be more deceptive than the many half-misnomers (such as "Fikellura ware" or "Nolan amphora") which their convenience has made indispensable to our technical language. I intend to keep the name "Tyrrhenian," since it is impossible to devise a substitute that would not introduce confusion.[11] Indeed, the merits of Thiersch's truly important work almost demand that his designation be kept.

Since those who accepted the term "Tyrrhenian" have not used it very consistently, it may be opportune to indicate briefly the range of this denomination. "Tyrrhenian" vases are in the main ovoid neck-amphorae, decorated with narrative friezes on the shoulders, subsidiary bands of animals below [12] and rays above the echinus-shaped foot. This combination of the narrative and decorative elements constitutes the "*Tyrrhenian*" *decoration* which can also be found on hydriai and dinoi.[13] But "Tyrrhenian" is above all the name of a *style*, the chief, though by no means sole, characteristic of which is this type of decoration. I propose to use the word "Tyrrhenian" only as a *stylistic* term, where it also covers vases which do not have the "Tyrrhenian" system of *decoration*, while others which share the *decorative* scheme with "Tyrrhenian" vases, but not its *style*, are excluded.[14] In some cases the stylistic border line is admittedly hard to draw, yet I think Thiersch is right in refusing to admit into the circle of "Tyrrhenian" style the group of amphorae Louvre E 855–857 [15] (subsequently enlarged by Rumpf and Beazley),[16] now called O.L.L. group [17] in spite of its superficially "Tyrrhenian" appearance.

[8] *Op. cit.*, p. 10; Mingazzini, *Vasi della collezione Castellani*, p. 221. Beazley (*JHS.* 51, 1931, p. 299) doubts that the "Tyrrhenian" vases were made exclusively for the Etruscan market. The fragment from Naucratis in Oxford which he cites is not from a "Tyrrhenian" amphora proper, but seems to belong to the Oxford-Louvre-Leipsic group (see below p. 165 and note 16). The Acropolis fragment (Graef, pl. 47, no. 779) may or may not come from a "Tyrrhenian" amphora. Significant is the absence of any "Tyrrhenian" in the Agora finds. The fragment published in *Hesperia* (9, 1940, p. 176, fig. 19, 61) is not "Tyrrhenian", as stated in the description.

[9] Pottier, *CVA.* Louvre III H d p. 1; Perrot, *Histoire de l'art dans l'antiquité* 10, p. 100; Brants, *Description of the Vases*, p. 16; Karo, *AA.* 51, 1936, col. 170.

[10] William N. Bates in *AJA.* 1907, pp. 439–440, quotes Thiersch and yet claims that the "place of manufacture is still unknown" of the "Tyrrhenian" amphorae and goes on to say that Thiersch suggests Ionia as place of manufacture.

[11] Buschor, who never liked the term "Tyrrhenian," now proposes, not very happily, to call the "Tyrrhenian" amphorae "mehrfriesige Halsamphoren" (*Griechische Vasen*, 1940, p. 107).

[12] At times ornamental bands or secondary narrative friezes are interspersed.

[13] E.g. Leyden P.C. 47; Brants, pl. 20, 3–3c; Louvre E 875; Pottier, *Vases antiques du Louvre* 2, pl. 62; Perrot, *Histoire de l'art* 10, p. 115, fig. 81; p. 116, fig. 82. *CVA.* Louvre III H d, pls. 18–19; Giraudon 32957/8.

[14] I therefore include such neck-amphorae as listed below, Timiades painter nos. 9–10 and a neck-amphora in Bonn (*AA.* 50, 1935, cols. 429/430, figs. 16–17). Cf. Beazley's remarks in *JHS.* 54, 1934, p. 88. "Tyrrhenian" in style is also a plate in Wuerzburg (Langlotz, pl. 29, no. 167). The hydriai London B 76 (from Rhodes) and collection W. R. Hearst, San Simeon, California, and the dinos in Boston (34.212) are not "Tyrrhenian" in style.

[15] Thiersch, *op. cit.*, p. 141.

[16] Rumpf, *AA.* 38/39, 1923/1924, cols. 62–64. The Oxford amphora, now published by Beazley (*CVA.* Gr. Br., pl. 411, 1–2, where he draws attention to Rhodes 6589 (*Clara Rhodos* 3, 26–27; *CVA.* Italy pl.

The distinguishing features of this "Tyrrhenian" style were recognized and well demonstrated by Thiersch. Its unique traits made him believe that all "Tyrrhenian" amphorae which he enumerated and analyzed were the product of one man.[18] In one place, however, he tacitly allowed for more than one painter, where he pronounced a small number of amphorae to be the work of one hand.[19] The assumption that all "Tyrrhenian" amphorae were painted by one man was not attacked by Karo, who reviewed Thiersch's book,[20] but Pfuhl already expressed doubts,[21] and both Rumpf and Beazley made positive contributions to the connoisseurship of "Tyrrhenian" by grouping certain amphorae and assigning others to their painters.[22]

In a study of Amazons in Greek art recently undertaken, I was confronted with the problem of dating and grouping two dozen pictures of Amazons on "Tyrrhenian" vases. Not even if I had shared Thiersch's inclination to explain discrepancies of style as mere qualitative and chronological differences, could I have persuaded myself that all "Tyrrhenian" Amazonomachies were the work of one hand. The following list of eight painters grew out of my attempts to group and date those vases. It covers less than half the "Tyrrhenian" amphorae, yet I am confident that in due time it will be possible to enlarge this list considerably. Of the 90 "Tyrrhenian" amphorae known to me, almost half are either completely or partially unpublished, and of the published ones half are reproduced in the publications on too small a scale. In this country there are only two "Tyrrhenian" amphorae and the fragment of one "Tyrrhenian" hydria.[23] American collectors cared for them as little as for their successor, the Nikosthenic neck-amphora.[24]

In point of quality the work of the "Tyrrhenian" group cannot be given much

495, 1–2), is probably another member of the group. In shape, style, and composition these amphorae differ more from the "Tyrrhenian" group than any two "Tyrrhenian" vases among themselves.

[17] Beazley, in a letter. [18] *Op. cit.*, pp. 13–14. [19] *Op. cit.*, p. 47.

[20] *Ph.W.* 20, 1900, pp. 177–181. [21] *MuZ.* 1, p. 248.

[22] Rumpf, in *AA.* 1923/1924, cols. 68–69, assigned the Hague amphora (Thiersch 48, see below, Komos painter 4) and Karlsruhe 200 (Thiersch 58) to the same hand as a Leipsic "Tyrrhenian." Beazley, in *JHS.* 52, 1932, p. 142, connected four amphorae with a "Tyrrhenian" in Goluchow and assigned them to one hand (see below, Goltyr painter), and recently (in *La Raccolta Guglielmi*, p. 26) compared the style of a "Tyrrhenian" in the Vatican with that of two other "Tyrrhenian" amphorae (see below, Komos painter). Not having seen the vases Rumpf put together, or at least good reproductions, I can neither subscribe to his attributions nor disagree with them.

[23] Boston 98.916; Philadelphia MS 2522. See below, Timiades painter 3, 7. New York 07.156.7. The Philadelphia amphora is in a very poor condition. Before its purchase by the University Museum, the background around the figures had been scraped off to the depth of more than one mm. In this process much of the figures' original outlines has gone, though they can still be traced, since the clay looks darker where ancient glaze has been removed. To correct Bates' description and drawings (*AJA.* 1907, pp. 429–440) in but a few points, it should be noted that he omits on the shoulder frieze of the obverse the beard and penis of Achilles, the water which flows into the basin, the side handles of Polyxena's hydria, and the shield devices of the warriors (bull's head, caboshed; flying eagle). On the reverse the right "girl-cock's" head is repainted, the head of the left girl-cock was considerably bigger. The arms of the right dancer originally started higher up. The head is modern and so is the black of the objects held by the two dancers which before their restoration were wreaths, as we find them on the reverse of the Polyxena amphora in London (see below, Timiades painter 5). The principal restorations in the animal friezes are the tail of the central sphinx (*AJA. l.c.*, fig. 5), which—ignoring the modern rosette—should curl like the tail of the Boston sphinx (pl. III), and the head of the "bull" (*AJA. l.c.*, fig. 6), which was that of a ram before it fell into the restorer's hands.

[24] In this country there are only two complete Nikosthenic amphorae, in Baltimore and Providence, and fragments of others in Chicago and (so Mr. F. P. Johnson informs me) in Kansas City.

importance in the history of Attic black-figure. Its best painters are never quite as good as their better known neighbors in the Kerameikos.[25] Others begin well, but deteriorate; others again are consistently ragged draughtsmen. But none of them are bores. Their subject matter is at least instructive, if not amusing; their compositions are fresh and vigorous; there is something piquant and interesting even in their ludicrous pride in their own literacy.[26] Their output is numerous: the demand for their work must have been great. We do not regret their disappearance after the middle of the sixth century, but we might wish they had been succeeded in the Etruscan market by someone more entertaining than Nikosthenes, whose shop not only revived what was played out in the "Tyrrhenian" style, but quite recklessly fused it with a novel bad taste of its own. In their very ephemerality the "Tyrrhenian" painters are enjoyable, and we pardon them many a careless drawing. As they left no signatures, we do not know their names. May the designations which I have had to contrive serve as substitutes and pave the way toward a better appreciation of these artists.

I should like to add here a few remarks about the painters whose works I give below. I have kept Thiersch's division of the amphorae into those without and those with dicing (*Punktband*). There is much sense in this division: I have not yet found an amphora without dicing painted by a "dicer," or *vice versa*. The work of the "dicers" is more slovenly and must be on the whole later. Their inscriptions never make sense.

A. The Timiades painter. I name him after the fallen Greek warrior on the Boston Amazonomachy (3). Timiades does not occur in literature, nor on any other vase. In the drawing of the warriors this painter has something in common with the artist of the dinos Acropolis 606. His inscriptions make sense, his mythology is interesting. The major subject is given on the obverse: the reverse is often used for heraldic animals. These animals are at times queer cock-combinations: panther-cock (4, 6), boar-cock (6), girl-cock (4, 7),[27] but never the horse-cock,[28] so popular afterwards, the goat-cock,[29] or the bull-cock.[30] Nos. 1–5 are better than 6–7, which may be imitations in his manner. No. 8 stands a little apart, though the startled boy has a brother on the Boston reverse (3). Nos. 9–10 are "Tyrrhenian" in style but not in scheme of decoration.

B. The Goltyr painter. He was named so by Beazley in a letter.[31] I had put together nos. 1–6 before I saw Beazley's list.[32] This painter is perhaps the most idiosyncratic "Tyrrhenian" artist. He draws animals in a style of caricature entirely his own, at its strangest in the bulb-headed rams. His warriors wear peculiar corslets with double spirals below and above. Their favorite shield-device is the thunderbolt. His naked men have a double line across their chests. No. 7 is probably largely mod-

[25] Such as Klitias, Nearchos, Lydos.

[26] Cf. the full names of epic heroes or the Hermes inscription on the Berlin *Birth of Athena* (see below, Kyllenios painter no. 1).

[27] I.e. a cock with a woman's or girl's head.

[28] Occurs in "Tyrrhenian" on the Kyllenios painter's amphora in Bonn.

[29] Boeotian lekane, Brussels A 1389 (*MMS.* 4, 1932, p. 34, fig. 27).

[30] Gem in the British Museum (H.B. Walters, *Catalogue of the Engraved Gems and Cameos in the British Museum*, no. 523, pl. 9).

[31] "Short for Goluchow 'Tyrrhenian.'"

[32] *JHS.* 52, 1932, p. 141.

ern, but the ancient parts look like work of the Goltyr painter. An ovoid neck-amphora in the Hearst collection in San Simeon recalls his style.[33]

C. The Kyllenios painter. He gets his name from the Hermes inscription on the Berlin *Birth of Athena* (1). There may be more vases by this man among the ill-published Louvre lot. Characteristic are his stiff warriors and the grouping of the animals in the three bands under the shoulder.

D. The Prometheus painter. Contrary to Thiersch, who excluded my name-piece (1), I do not believe that the Florence *Liberation of Prometheus* is a descendant of those vases which by now are known under the name Oxford-Louvre-Leipsic group (or O.L.L. group).[34] The Prometheus painter's subject matter differs widely; the nexus of the group, however, is evident in the style of the animals, especially the roes and heraldic sphinxes.

E. The Pointed-Nose painter. The characteristic profiles of his warriors are my warrant for his name. His style, if not admirable, is quite remarkably individual. His rams have very truncated muzzles; his sirens have a goose-like air. The nonsense inscriptions are the same on the two vases.

F. The Castellani painter. He is the earliest of the painters who separate their shoulder friezes from the animal bands below with dicing. The fallen warriors on the Berlin and Castellani amphorae and the cock and seated sphinx combinations in the first animal frieze make me feel certain that the two vases are by the same hand. The favorite shield-device is a panther's protome. Related to the Castellani painter's style is at least the Amazonomachy, if less certainly the other paintings, on the monster "Tyrrhenian" in Florence.[35]

G. The Fallow Deer painter. Especially characteristic are his animals. The deer have a neat row of white dots on their backs and the panthers wag their tails in a peculiar fashion. These amphorae are smaller than the rest. The Tarquinia amphora (1) is the painter's most careful work. The Robinson hydria in Baltimore [36] shows affinities with Munich J 127 (7) and in its shoulder scene also with the Tarquinia Niobids (1).

H. The Komos painter—not very far from the Fallow Deer painter. Beazley compared the Guglielmi amphora's (6) style with the style of Munich 1433 (5) and Louvre E 833 (2). The Munich Centauromachy (5) and the Guglielmi Trojan battle (6) are better than the rest, but the identical nonsense inscriptions establish a clear connection with the others. The Louvre hydria (7) is in the same style. These vases are late and somewhat degenerate: we have gone a long way from the elegant heroes of the Timiades painter.

It may prove useful to give here a supplement to Thiersch's list of "Tyrrhenian" amphorae with animal friezes. The order is that of publication.

[33] San Simeon, California ex Revelstoke collection, *Catalogue of the Collection of Ancient Greek Pottery sold by Puttick and Simpson, April 5, 1935*, pl. 2, no. 86. [34] Cf. above, p. 162 and note 16.

[35] 3773 (1786). Inghirami, *Vasi Fittili* 4, pls. 301, 303–307; Thiersch, pls. 3–4; Montelius, *La Civilisation*, pl. 380, 6; Milani, *Il R. Museo Archeologicio di Firenze* 2, pl. 40, 2; Pfuhl, *MuZ.* 3, fig. 204; Brogi 10750; Alinari 17071; Alinari 45763.

[36] Ex Ruspoli. *CVA.* Baltimore 1, p. 36, fig. 2; pls. 17–18, 1. By the same hand as the hydria is a dinos in Boston (34.212) and a neck amphora in the Hearst Collection (SSW9950, *Catalogue Sotheby, 24 February 1920*, p. 19, no. 225.

1. Boulogne. R. de Lasteyrie, *Album archéologique des musées de Provence*, pl. 13, 126.
2. Sassari, Sardinia. See Timiades painter no. 8.
3. Philadelphia MS 2522. See Timiades painter no. 7.
4. Orvieto, Faina. Montelius, *La civilisation*, pl. 247, 5; Alinari 32496; Vorberg, *Glossarium Eroticum*, p. 466.
5. Munich, Hirth. See Goltyr painter no. 3.
6. Leipsic, University. *AA*. 1923–24, cols. 56 ff.
7. Leipsic, University. *AA* 1923–24, cols. 65 ff.
8. Brussels A 715, *CVA*. Belgium, pl. 12, 2.
9. Collection Stanley. *Sotheby, 2 April 1928*, pl. 6, 125.
10. Munich A 895. Vorberg, *Die Erotik der Antike in Kleinkunst und Keramik*, pls. 68–70. First mentioned by J. de Witte, *Description d'une collection de vases peints et bronzes antiques provenant des fouilles de l'Etrurie*, 1837, pp. 9–10, no. 15.
11. Goluchow 9. See Goltyr painter no. 6.
12. Cambridge 32.1. Sotheby, *21 March 1932*, pl. 3, 73. *CVA*. Great Britain, pl. 501, 1.
13. Bremen, Collection Magnussen. See Timiades painter no. 6.
14. Chiusi 1804. Described by D. Levi, *Il museo civico di Chiusi*, p. 112.
15. Vatican G 13. See Komos painter no. 6.

"TYRRHENIAN" PAINTERS

The shape, unless otherwise specified, is that of the ovoid neck-amphora. The T numbers in parenthesis are the numbers of Thiersch's catalogue.

First group, without dicing.

A. The Timiades Painter.

1. (T 3) Munich 1426 (J. 124). B and shoulder of A, Gerhard, *AV*., pl. 223. Shoulder of A, Thiersch, "*Tyrrhenische*" *Amphoren*, pl. 1.
   A, Schaal, *Bilderhefte* 3, pl. 20, 38; Buschor, *Griechische Vasen*, 1940, p. 107, fig. 123. Detail of first animal band on B, *Muench. Arch. St.*, p. 326, fig. 39.
   A, Death of Troilos. Inscriptions.
   B, Between two swans, two sphinxes.
2. (T 4) Tuebingen D 2 (ex Berlin 1706). Fragmentary. Shoulder of B, Watzinger, *Griechische Vasen in Tuebingen*, pl. 4.
   A, Kalydonian boar hunt. Inscriptions.
   B, Between two sirens, two swans.
3. (T 12) Boston 98.916. B and shoulder of A, Gsell, *Fouilles de Vulci*, pls. 5–6, whence (part) Montelius, *La civilisation*, pl. 271, 1. Here pls. III-VI. The shape, Caskey, *Geometry of Greek Vases*, p. 56, no. 19.
   A, Herakles in Amazonomachy. Inscriptions.
   B, Between two swans, four dancers.
4. (T 15) Berlin 1707. B and shoulder of A, Gerhard, *ECV*., pl. 10, 4–6.
   A, Kalydonian boar hunt.
   B, Between two panther-cocks, dancer.
5. (T 10) London 97.7–27, 2. B and shoulder of A, *JHS*. 18, 1898, p. 283, fig. 2, pl. 15. A, H.B.Walters, *History of Ancient Pottery* pl. 23; Homann-Wedeking, *Archaische Vasenornamentik*, fig. 8.

A, Death of Polyxena. Inscriptions.
B, Between two cocks, four dancers.

6. Bremen, Magnussen. On loan in the Focke Museum. A, *Bremer Wissensch. Gesellsch. Abh. u. Vortr.* 7, 1–2, 1933, pl. 8. In poor condition.
A, Achilles and Memnon (?)
B, Between two sirens, two swans.

7. Philadelphia MS 2522. *AJA.* 1907, pp. 429–440. In poor condition.
A, Achilles and Troilos at the fountain.
B, Between two "girl-cocks," two dancers.

8. Sassari (Sardinia). *Strena Helbigiana*, pp. 62–64.
A, Four symplegmata and a boy.
B, Between two swans, siren.

9. Munich 1436 (J 89). A, Buschor, *Griechische Vasen*, 1940, p. 107, fig. 124. Shoulder of A, *BSA.* 36, 1939, p. 159, fig. 6.
A, Achilles and Troilos at the fountain.
B, Procession of Warriors.

10. Louvre E 866. *CVA.* France, pl. 58, 11; pl. 59, 3; details, pl. 60, 3–4.
A, Battle.
B, Three horsemen galloping left.

B. The Goltyr Painter.

(J. D. Beazley, in *JHS.* 52, 1932, p. 142, connected 1, 3–6. Langlotz, *Griechische Vasen in Wuerzburg*, p. 26, saw that 2–5 were contemporaneous.)

1. (T 33) Leiden P.C. 36. Brants, pl. 19, 2
A, Between two sphinxes, Amazonomachy.
B, Between two sirens and cocks, komast.

2. (T 73) Wuerzburg 168. B, Sittl, *Dionysisches Treiben*, p. 24, fig. 6; Langlotz, *Griechische Vasen in Wuerzburg*, pl. 30.
A, Between sphinxes and cocks, Amazon.
B, Between two sirens, three komasts.

3. Munich, Hirth. (ex J. Hirsch) A, *Vente Hirsch*, pl. 4, 149.
A, Between onlookers, fight.
B, Between cocks and sirens, komast.

4. (T 6) Louvre E 840. *CVA.* France, pl. 33, 6/12. A, Morin-Jean, *Les animaux en Grèce d'après les vases peints*, p. 163, fig. 190.
A, Herakles in Amazonomachy.
B, Between cocks and sphinxes, komast.

5. (T 5) Louvre E 839. *CVA.* France, pl. 33, 4/10.
A, Between sphinxes, Amazonomachy.
B, Cocks and sirens.

6. Goluchow 9. *CVA.* Poland, pl. 8.
A, Between sphinxes, two pairs of revellers.
B, Between sirens and cocks, komast.

7. Louvre E 853. *CVA.* France, pl. 35, 7/15. Very much restored.
A, Between onlookers, fight.
B, Cocks and sirens.

The following "Tyrrhenian" amphorae were grouped with our no. 1 by Thiersch (*op. cit.*, p. 47) and assigned to one hand. They are unpublished and I have not seen them, yet judging by Thiersch's description, I should expect them to prove works of the Goltyr painter.

8. (T 32) Munich J.174.
   A, Between sphinxes and cocks, Amazon.
   B, Between cocks and sirens, komast.
9. (T 34) Florence 1845.
   A, Between sphinxes, two pairs of revellers.
   B, Between cocks and sphinxes, komast.
10. (T 35) Gotha 12
   A, Centauromachy.
   B, Sphinxes and cocks.

C. The Kyllenios Painter.

1. (T 26) Berlin 1704. *Mon. Ined.* 9, pl. 55. Detail of shoulder of A, J. Kirchner, *Imagines*, pl. 3; Cook, *Zeus* 3, pl. 54.
   A, Birth of Athena. Inscriptions.
   B, Battle.
2. (T 30) Louvre E 834. *CVA*. France, pl. 32, 5/11. Alinari 23704.
   A, Battle.
   B, Battle.
3. (T 27) Bonn 37 (ex Fontana). A, M. Zimmermann, *Kunstgesch. d. Altert.*, p. 53, no. 10; *REA*. 6, 1904, p. 26 and pl. 1, 5 (the hippalektryon). The inscriptions are published *AEM*. 2, p. 20.
   A, Amazonomachy?
   B, Battle.
4. (T 21) London B 48. Shoulder of A, *JdI*. 5, 1890, p. 234. Detail of shoulder of A, E. N. Gardiner, *Athletics of the Ancient World* fig. 106.
   A, Athletes. Inscriptions.
   B, Battle.

D. The Prometheus Painter.

1. Florence 76359. A, Thiersch, pl. 2, 6. Shoulders of A and B, *Stud. e Mat.*, 3, pl. 2; Milani, *Il R. Museo archeologico di Firenze* 2, pl. 40; 3; Brogi 10750; Alinari 17071.
   A, Liberation of Prometheus. Inscriptions.
   B, Centauromachy.
2. (T 24) Florence 70993 (1852). A, Milani, *op. cit.*, 2, pl. 40, 1; Brogi 10750; Alinari 17071.
   A, Fight for the body of Troilos. Inscriptions.
   B, Five horsemen.
3. (T 61) Copenhagen 57. *CVA*. Denmark, pl. 103, 1; Vorberg, *Glossarium Eroticum*, pp. 631–632.
   A, Revellers. Inscriptions.
   B, Revellers.

E. The Pointed Nose Painter.

1. (T 16) Louvre E 844. *CVA*. France, pl. 34, 3/11 and pl. 37, 1.
   A, Battle.
   B, Between two sphinxes, revellers.
2. (T 2) Leiden P. C. 53. Brants, pl. 19, 1.
   A, Achilles and Memnon (?)
   B, Between two sphinxes, revellers.

Second group, with dicing.

F. The Castellani Painter.

1. (T 59) Villa Giulia. A, Baur, *Centaurs*, pl. 3, 39; Mingazzini, *Vasi della collezione Castellani*, no. 454, pl. 53, 2; pl. 54, 4; pl. 55, 1, 3.

A, Centauromachy.
B, Amazonomachy.

2. (T 57) Berlin 1710. A and shoulder of B, Micali, *Storia*, pl. 83.
A, Montelius, *La civilisation*, pl. 232, whence Montelius, *Die vorklassische Chronologie*, pl. 75; Neugebauer, *Fuehrer*, pl. 25.
A, Herakles in Amazonomachy.
B, Komasts. Red nonsense inscriptions (cf. *JHS.* 49, 1929, p. 262).

G. The Fallow Deer Painter.

1. (T 46) Tarquinia. *AD.* i, pl. 46. A, Montelius, *La civilisation*, pl. 300, 4.
A, The slaying of the Niobids.
B, Four horsemen.

2. (T 40) Munich J. 156. A, *Mon. Ined.*, pl. 26, 10.
A, Herakles and Nessos.
B, Four horsemen.

3. (T 76) Wuerzburg 170. Fragment. Langlotz, *Griechische Vasen in Wuerzburg*, pl. 122.
A, Probably Achilles and Memnon.
B, Probably four horsemen.

4. (T 43) Louvre E 845. *CVA.* France, pl. 34, 5/13.
A, Achilles and Memnon (?)
B, Woman and three horsemen.

5. (T 44) Louvre E 846. *CVA.* France, pl. 34, 6/14.
A, Battle.
B, Four horsemen.

6. (T 45) Louvre E 847. *CVA.* France, pl. 34, 7/15.
A, The slaying of the Niobids.
B, Four horsemen.

7. (T 41) Munich J. 127. Shoulders of A and B, *Muench. Arch. St.*, p. 410, fig. 2, p. 414, fig. 3.
A, Fight.
B, Fight.

H. The Komos Painter.

(Nos. 2, 5, 6 were compared by Beazley, *La Raccolta Guglielmi*, p. 26)

1. (T 47) Munich 1432 (J. 175). A, Lau, pl. 8, 1 (with alien shoulder scene), whence Montelius, *Die vorklassische Chronologie*, pl. 15, 2. A and shoulders of A and B, Vorberg, *Die Erotik der Antike in Kleinkunst und Keramik*, pls. 65–67; A, Licht, *Sittengeschichte* 3, p. 157.
A, Revellers.
B, Revellers.

2. (T 50) Louvre E 833. A, Pottier, *Vases antiques du Louvre*, pl. 58. *CVA.* France, pl. 32, 3/9; pl. 37, 3.
A, Amazonomachy.
B, Five horsemen.

3. (T 51) Louvre E 830. *CVA.* France, pl. 32, 1/7. Alinari 23704.
A, Revellers.
B, Revellers.

4. (T 48) The Hague, Museum Meermanno-Westreenianum. Shoulders of A and B, *JdI.* 5, 1890, p. 244. The nonsense inscriptions are published: *Berichte der Kgl. Saechs. Gesellsch. der Wissensch.* phil. hist. Kl. 12, 1860, p. 4.
A, Herakles and Nessos.
B, Revellers.

5. (T 52) Munich 1433 (J. 126). Shoulders of A and B, Baur, *Centaurs*, pl. 1. A, Schaal, *Bilderhefte* 3, pl. 20, 37.
   A, Herakles and Nessos.
   B, Centauromachy.
6. Vatican G. 13. Beazley, *La Raccolta Guglielmi*, pl. 2.
   A, Trojan Amazonomachy.
   B, Achilles and Memnon.

Hydria.

7. Louvre E 870. *CVA*. France, pl. 61, 2, 4, 5. Pottier, *Vases antiques du Louvre*, pl. 60, whence Perrot, *Histoire de l'art* 10, p. 123, fig. 90.
   On shoulder, komos.
   On body, fight.

U. S. Army. DIETRICH VON BOTHMER

A FAÏENCE HEAD OF AUGUSTUS

AMONG the objects of small size of the Ptolemaic and Roman periods in the collection of Egyptian antiquities of the Metropolitan Museum of Art a small blue-green faïence head is of particular interest (figs. 1–5). It once formed part of the Carnarvon collection.[1] Its provenience is given as Memphis.

This head, which measures 6.8 cm. in height, has suffered considerable damage. It is broken off along a line that runs from the chin to the base of the skull. The hair has been damaged in several places, particularly on top, over the forehead on the right side, over the right temple (fig. 2), and in the back on the right side. The damage at this point takes the form of a roughly circular depression with rather pitted surface that suggests the head was once used to hammer a blunt, cylindrical object of small diameter (fig. 3). The right ear entirely, the left ear in great part, the nose, and part of the chin are missing. There is a deep cut on the lower right cheek. The surface of the left cheek is damaged in an oblique line running from the cheek bone to the mouth. The faïence glaze has disappeared, except for small patches, from all but the chin and the left side of the face (fig. 4). Only a faded green coloration remains in its place. The preserved glaze is considerably discolored by a blackish stain.

In spite of its battered condition and small size, this faïence head seems to the writer to be an unmistakable portrait of Augustus. The broad, deep skull, the profile, the eyes, mouth, and arrangement of the hair at the temples are the familiar ones of Augustan portraiture (figs. 1, 5). The general type to which this faïence head belongs is, however, the less numerously represented late portrait type already foreshadowed in the beautiful Ancona head.[2] In the Ancona portrait the characteristic tongue-like locks which, as they appear in the Prima Porta type,[3] reach down over the forehead in separate strands, are beginning to straighten out into the continuous line across the forehead that distinguishes the latest phase of the portraiture of the living Augustus.[4] In the late portraits, as represented by the heads in the Louvre (1280, 1276),[5] the Capitoline head (fig. 6),[6] the head from Ostia,[7] and the Boston head

[1] Accession No. 26.7.1428. I should like to express here my warm thanks to Dr. Ambrose Lansing, Curator of the Department of Egyptian Antiquities of the Metropolitan Museum of Art, for his generous kindness in granting me permission to publish this head and in supplying me with photographs of it.

[2] P. Marconi, *BdA.* 26, 1932–33, pp. 149–153, figs. 1–4; R. Paribeni, *Il Ritratto nell'Arte Antica*, pl. 113; *CAH.* volume iv of Plates, p. 146 c–d; I. Montini, *Il Ritratto di Augusto* (hereafter referred to as Montini), p. 66.

[3] W. Amelung, *Skulpturen d. Vatican* i, p. 19, no. 14, pl. 2; A. Hekler, *Greek and Roman Portraits*, 170–171; R. West, *Römische Porträt Plastik*, pl. xxxviii, 163; Paribeni, *op. cit.*, pl. 112; *CAH.* volume iv of Plates, p. 148 a, 150; Montini, p. 55.

[4] His posthumous portraits respond, of course, to other considerations than those of contemporary living likeness and show different characteristics which may be summarized as a tendency toward increasing idealization.

[5] E. Michon, *Catalogue Sommaire des Marbres Antiques*, p. 74, 1280; Montini, p. 68; E. Michon, *op. cit.*, p. 73, 1276; P. Marconi, *op. cit.*, p. 154, fig. 8; L. Curtius, *RM.* 50, 1935, p. 281, who believes that the Capitoline, Boston, and Louvre 1276 portraits do not represent Augustus (see F. Poulsen, *Römische Privatporträts und Prinzenbildnisse*, 26–27, to the contrary).

[6] H. Stuart-Jones, *The Sculptures of the Museo Capitolino*, pl. 46; R. West, *op. cit.*, pl. xxviii, 115; Arndt-Bruckmann, 249–250; Montini, p. 70; L. Goldschneider, *Roman Portraits*, pl. 22.

[7] G. Calza, *L'Antiquarium di Ostia*, p. 43; Montini, p. 71; G. Ricci, *BullComm.* lxvi, 1938, pp. 57–59, Tav. Agg. A.

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FIG. 1.—FAÏENCE HEAD IN THE METROPOLITAN MUSEUM
(Courtesy of the Metropolitan Museum of Art)

FIG. 5.—PROFILE VIEW OF FIG. 1
(Courtesy of the Metropolitan Museum of Art)

FIG. 2.—RIGHT SIDE OF FIG. 1

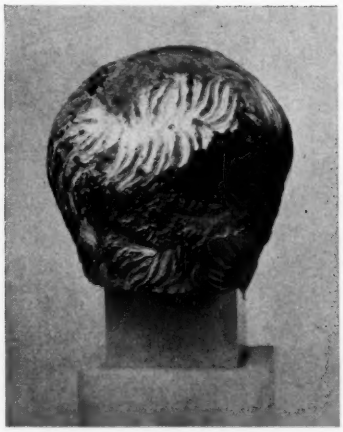

FIG. 3.—BACK OF FIG. 1
(Courtesy of the Metropolitan Museum of Art)

FIG. 4.—LEFT SIDE OF FIG. 1

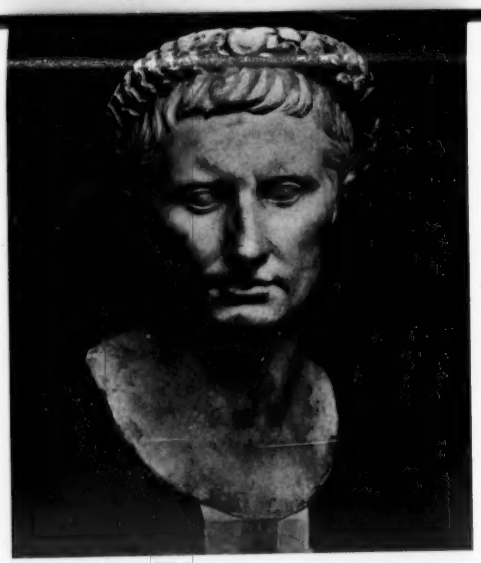

FIG. 6.—HEAD OF AUGUSTUS IN THE MUSEO CAPITOLINO, ROME

FIG. 7.—HEAD OF AUGUSTUS, MUSEUM OF FINE ARTS, BOSTON
(Courtesy of the Museum of Fine Arts)

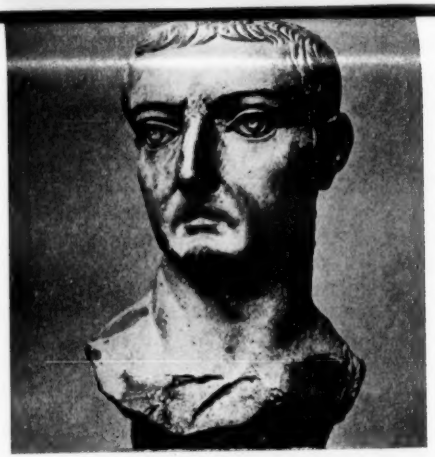

FIG. 8A.—FAÏENCE HEAD OF TIBERIUS, CABINET DES MÉDAILLES, PARIS

FIG. 9.—TURQUOISE HEAD OF AUGUSTUS IN THE UFFIZI, FLORENCE
(From *JdI*. 40, 1925, pl. 4)

FIG. 8B.—FAÏENCE HEAD OF TIBERIUS, CABINET DES MÉDAILLES, PARIS
(From *JdI*, 40, 1925, pl. 5)

(fig. 7),[8] this development is carried further. The central hair strands of these portraits, all curling to the right rather than to the left and right from the center,[9] as in most of the earlier portraits, are so brushed to the right that their ends form an almost straight line beyond which only an occasional tip projects. This is the arrangement of the Metropolitan faïence head, clearly recognizable in spite of the damage done to the strands on the right side (figs. 1, 2, 4).

Another characteristic of the late Augustan portrait is the presence of one or more horizontal lines running across the brow[10] and of two vertical lines, one on each side of the nose where it joins the forehead. In the Metropolitan faïence head the two vertical lines are clearly rendered, but it has no horizontal lines. The division between the upper and lower halves of the forehead is indicated, but nothing more. The absence of the long horizontal lines is readily accounted for, I believe, by the small size of the faïence head. The surface of the forehead is so narrow that its subdivision by horizontal lines would create an unpleasant furrowed, almost striped, effect. The small bronze bust of Augustus in the Louvre referred to in note 9 is an *exemple horrible* of the results that can be achieved by excessive horizontal subdivision of a narrow surface. It is also worth noting in this regard, that the sculptors of two of the best known representatives of the late type of Augustan portraiture, the noble Capitoline head (fig. 6) and the lovely Boston head (fig. 7), have limited themselves to just one horizontal line.[11]

Most of the extant replicas of the late Augustan portrait type display a peculiarly hard flat rendering of the strands of hair over the forehead and temples (fig. 6). The hair of the head in Boston (fig. 7) is treated, however, in a much softer and more plastic manner than it is in the other portraits of this group or in the Metropolitan head. The latitude that the artists allowed themselves in rendering the texture of the hair was, in any case, considerable, as is perhaps best illustrated by the extraordinary portrait of Augustus recently discovered at Fondi.[12]

The iris and pupils of the Metropolitan head are incised, as they regularly are in faïence portraits and those made of more precious materials. A close chronological parallel for this treatment of the eyes is furnished by the faïence portrait of Tiberius in the Cabinet des Médailles (fig. 8).[13] Presumably, the eyes of another small faïence bust in the same collection, identified as a portrait of Livia, are similarly treated.[14]

[8] L. D. Caskey, *Catalogue of Greek and Roman Sculpture*, pp. 193–194, 110.

[9] The hair of the small bronze bust in the Louvre (A. de Ridder, *Les Bronzes Antiques du Louvre* i, p. 11, 28–29, pl. 5, 29; West, *op. cit.*, pl. xxx, 124; Paribeni, *op. cit.*, p. 21, fig. 23; Montini, p. 73), which is unique among the late portraits of Augustus in several respects, curls from each end toward the center in thin strands rather than, as in the earlier portraits, outwardly from the center to each side.

[10] The Capitoline and Boston heads show one horizontal line; the head at Ostia, the Louvre (1280) and Ancona heads show two. It is not clear from Marconi's illustration whether Louvre 1276 has two horizontal lines or one, but it seems to have two. The small bronze bust in the Louvre referred to in note 9 portrays Augustus with four deep horizontal furrows.

[11] This is best seen for the Capitoline head in pl. 22 of Goldschneider, *op. cit.*

[12] D. Mustili, *NS.* 1937 p. 61; R. Horn, *AA.* 52, 1937, pp. 408–414, fig. 22–23; F. Poulsen, *op. cit.*, p. 27.

[13] R. Delbrück, *JdI.* 40, 1925, p. 15, pl. 5; E. Babelon, *Guide Illustré au Cabinet des Médailles*, 1900, p. 23.

[14] Babelon, *op. cit.* Delbrück (*op. cit.*) refers to the existence of other early imperial faïence portraits known to him, but the writer has been unable to find published descriptions or reproductions of them, and the times have not permitted a search by correspondence.

The closest parallel to the material of the Metropolitan head among the portraits of Augustus known to the writer is the small turquoise head in Florence (fig. 9).[15] For, as Delbrück has pointed out in his discussion of this head,[16] blue faïence was almost certainly used as a cheap substitute for turquoise and lapis lazuli. An example of the combination of all three materials is found in an object in the British Museum described as a "blue-glazed wig from a figure of a royal personage, with the fillet and the side bands inlaid with carnelian, turquoise, and lapis lazuli set in a gilded border." [17]

Two other small male imperial portraits of the Julio-Claudian period may be cited as parallels to the Metropolitan faïence in size, provenience, and, less precisely, in material. One is a tiny (2.5 cm.) head of Augustus in black glass paste in the museum of Alexandria.[18] The other is a minute (1.4 cm.) turquoise head of Tiberius from Canopus that is now in the British Museum.[19] The small (9.2 cm.) agate portrait of Augustus in the Cabinet des Médailles [20] may also be mentioned as another example of a miniature portrait of the emperor in a semi-precious material. It differs from the others, however, in being a portrait in high relief rather than in the round. There is also an unpublished, fragmentary, small head of Augustus in the Antiquarium del Governatorato in Rome which is worked in green basalt.[21] Delbrück infers from its material and Montini from its workmanship that it originated in Egypt.

The provenience of the turquoise portrait of Augustus in Florence is unknown. Delbrück very plausibly suggested, however, on the ground that blue faïence is an imitation of turquoise, that it is the work of an Egyptian artist.[22] The known Egyptian provenience of both the turquoise head of Tiberius in the British Museum and the faïence head of Augustus in the Metropolitan not only greatly increases the probability in favor of the Egyptian origin of the Florentine head, but seems also to point to Egypt as the chief center of the production of imperial portraits in semi-precious stones and in the various cheaper imitations of them.

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[15] Delbrück, *loc. cit.* 13–15, figs. 6–7, pl. 4. [16] *Loc. cit.*

[17] *A Guide to the Fourth, Fifth and Sixth Rooms and the Coptic Room of the British Museum*, 1922, p. 143, 38.

[18] E. Breccia, *Alexandrea ad Aegyptum* p. 185; P. Graindor, *Bustes et Statues-portraits d'Égypte Romaine*, p. 45, note 185.

[19] H. B. Walters, *Catalogue of Engraved Gems and Cameos in the British Museum*, p. 369, no. 3945, fig. 96, pl. 39.

[20] E. Babelon, *Catalogue des Camées Antiques et Modernes de la Bibliothèque Nationale*, pp. 106–107, 233, pl. xxiii, fig. 233.

[21] Delbrück, *ibid.*; Graindor, *ibid.*; Montini, p. 57, p. 91, no. 92. [22] *Loc. cit.* p. 15.

ATTIUS LACO, THE PROCONSUL, AND IUNIUS CILO, THE PROCURATOR, IN BITHYNIA

SELTMAN, in a stimulating article,[1] has published a bronze coin of Nicaea from the beginning of Nero's reign which bears the name of the *procurator Ponti et Bithyniae*, Iunius Cilo, on its *rev.*, and has an identical *obv.* die [2] with a more common variety of the same type in the Waddington Collection of Paris.[3] This latter type has an almost identical *rev.*,[4] but around, ἐπὶ Ἀττίου Λάκωνος ἀνθυπάτου, instead of ἐπὶ Ἰουνίου Χίλωνος ἐπιτρόπου. To Seltman's description of both coin types should be added that, as appears already from the photographs (*loc. cit.*) with certainty, the *obv.* die which connects both varieties was clearly in a better condition when combined with the *rev.* mentioning Iunius Cilo than when used together with the one mentioning Attius Laco, the proconsul of the province. The reference to Iunius Cilo has, therefore, to be considered as earlier in this combination of coins than that to Attius Laco.

It has not been noticed up to now that similar conditions can be observed on a larger bronze denomination of Nicaea which also dates from the earliest period of Nero's reign. A more common variety of this important type [5] answers to the following description: *obv.* Busts of Nero and Agrippina to l.; around, Νέρων Καῖσαρ Σεβαστός, Ἀγριππῖνα Σεβαστ.[6] *Rev.* Dionysus to l.; in r. hand, cantharus; in l. hand, thyrsus; the god's left foot on elephant's head to l.; on r., Νεικ down; around, ἐπὶ Ἀττίου Λάκωνος ἀνθυπάτου. Æ 27. In addition, I found an unpublished variety of this type in the General Collection of Greek Coins in The Fitzwilliam Museum, Cambridge, which has again an *obv.* die which is identical with that of a Paris coin [7] and a *rev.* which shows the usual type of its denomination and has around ἐπὶ Ἰουνίου Χίλωνος ἐπιτρόπου [8]; but, remarkably enough, in this case the *obv.* die had

[1] C. T. Seltman, "The Administration of Bithynia under Claudius and Nero," *Num. Chron.* 5th ser. viii, 1928, p. 100 f. and fig. 2. Cf. also Cl. Bosch, "Die kleinasiatischen Muenzen der roemischen Kaiserzeit" ii, 1, I, 1935, p. 83 f.

[2] *Obv.* Youthful head of Nero to l.; around, Νέρων Καῖσαρ Κλαύδιος Σεβαστός.

[3] Cf. for this piece W. H. Waddington—E. Babelon—Th. Reinach, *Recueil Général des Monnaies Grecques d'Asie Mineur* i, 3, 1910, p. 402, no. 38 and pl. 66, no. 13 and E. Babelon, "Inventaire de la Collection Waddington," *Rev. Num.* 4th ser., i, 1897, p. 293, no. 393. There are two specimens of this type in Berlin which cannot be checked by me at present. The coin described by P. Lambros in *BCH.* ii, 1878, p. 508 f., is perhaps one of these pieces which were acquired from the collections of Loebbeke and of Imhoof-Blumer.

[4] *Rev.* Horned altar on which flame, between ΝΕ and ΙΚ; on the main side of the altar, Διὸς Λιταίου in three lines. Cf. for this cult, A. B. Cook, *Zeus* ii, 2, 1925, p. 1099 f.; iv, 2, 1940, p. 1184.

[5] Cp. *Recueil*, i, p. 402, no. 36 and pl. 66, no. 12 (specimen of the Cabinet des Médailles of Paris), and, from different dies of *obv.* and *rev.*, *Brit. Mus. Cat. Pontus, Paphlagonia, Bithynia, Bosporus*, p. 154, no. 16 and pl. 32, no. 1.

[6] The reading Σεβασ in *Brit. Mus. Cat. loc. cit.* should be corrected. I do not know of a variety with the reading Σεβαστή, which is mentioned in *Recueil, op. cit.*, p. 402, no. 36, but I have not seen the Berlin specimen mentioned, *loc. cit.*

[7] *Recueil*, pl. 66, no. 12. It is my agreeable duty to thank Professor J. Babelon of Paris for sending me, in happier days of his country, casts of the Paris specimen which enable me to ascertain the above mentioned facts.

[8] This interesting piece was given to the Fitzwilliam Museum as part of the bequest of F.W.H. Hasluck in 1920, and was most likely acquired by this fine scholar on the spot during one of his journeys in Asia Minor. I have to thank L. C. G. Clarke, the Director of the Fitzwilliam Museum, for his kind permission to mention and describe this coin which will be finally published by me in *Sylloge Nummorum Graecorum* iv.

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been in a better condition when used with the *rev.* mentioning Attius Laco and had already a break when used with the new *rev.* die mentioning Iunius Cilo.

The new evidence teaches that two bronze denominations of different size were issued by Nicaea at the beginning of Nero's reign which were intended to honor both Iunius Cilo as well as Attius Laco. The striking of the smaller type seems to have begun with a *rev.* mentioning Iunius Cilo, and then to have changed to a die referring to Attius Laco. The larger type, on the other hand, appears to have begun with Attius Laco and subsequently have changed to Iunius Cilo. It is possible that *obv.* dies of coins which are not accessible or might not be known to me, were combined with *rev.* dies in a different sequence, a question of exclusively numismatic interest which can only be answered satisfactorily after the present war; but a problem of historical importance has now been solved. There cannot be any doubt that our two issues of Nicaea did not change the names of the two high Roman officials in consequence of a political dismissal, but intended to honor both the acting procurator and the acting proconsul of their province at the same time.

Seltman's thesis (*loc. cit.*) of a "dual control" of proconsul and procurator in the senatorial province of Pontus and Bithynia as early as in Nero's reign which he based on the smaller Nicaean issue only, has certainly been strengthened by the new evidence [9] as has been that of Bosch (*op. cit.*, p. 83 f., 88 f.), according to whom Attius Laco was proconsul of Pontus and Bithynia in A.D. 54/5, when Iunius Cilo was procurator of this province for the second time from A.D. 53 to A.D. 55. The position of Hirschfeld and A. Stein,[10] on the other hand, has been weakened, if not finally refuted, when they maintain that the province of Pontus and Bithynia was transferred into temporary imperial administration for the procuratorships of Iunius Cilo and C. Iulius Aquila under Claudius and Nero, and of Antonius Naso under Vespasian. This is one of the rare cases where numismatic finds are able to influence our views on Roman administrative policy in a senatorial province of the first century A.D.

F. M. HEICHELHEIM

UNIVERSITY COLLEGE, NOTTINGHAM, ENGLAND

[9] H. Dessau, *Geschichte der roemischen Kaiserzeit* i, 1924, p. 191 f., 195, and especially ii, 2, 1930, p. 578 f., considers, without mentioning Seltman's article and his new evidence, such a "dual control" as typical for the practice of Asia Minor in the first century A.D.

[10] Cf. now A. Stein in *RE.* x, 167 f., no. 81; 1030 f., no. 66; *Prosop. Imp. Rom.*[2] i, p. 165, no. 854; p. 273, no. 1359.

1944
April-June

ARCHAEOLOGICAL NEWS AND DISCUSSIONS

NOTES ON RECENT ARCHAEOLOGICAL EXCAVATIONS SUMMARIES OF ORIGINAL ARTICLES CHIEFLY IN CURRENT PUBLICATIONS

STEPHEN B. LUCE, *Editor-in-Charge*

Fogg Museum of Art, Harvard University, Cambridge, Mass.

NECROLOGY

Sir Aurel Stein. — We are deeply indebted to the Royal Central Asian Society for its courtesy and co-operation in sending us, through the good offices of Mr. Carl T. Keller of Boston, a member both of the Society and of the Institute, advance page proofs of the obituary written by its Hon. Secretary, GENERAL SIR PERCY M. SYKES, to appear in the *Royal Central Asian Journal*. As no tribute to his memory could be more complete and appreciative, we are taking the liberty of printing it in full. Sir Aurel's association with archaeological work in America is evidenced by his connection with the Fogg Museum of Harvard University, and the numerous friendships he had with American Orientalists. Besides our debt of gratitude to Sir Percy Sykes, who personally sent the proof sheets, we wish to express our thanks to Mr. Langdon Warner of Harvard University, and particularly to Mr. Keller, through whose efforts this tribute was secured. S. B. L.

The death of Sir Aurel Stein, at the ripe age of eighty, removes from the Central Asian scene one of the last of the great student-explorers who have written *Finis* on the exploration of the world in its widest sense. Of Jewish descent, he was born in Hungary, and was educated at Budapest, at Dresden and at the Universities of Vienna and Tübingen. In 1885 he came to London in order to pursue his study of Oriental languages and antiquities. He had from the first been inspired by the ambition to penetrate into the heart of Asia which, at that time, was almost a *terra incognita*. In London he met Sir Henry Rawlinson and Sir Henry Yule, the greatest figures of that period in the field of scientific exploration, and received from them fresh inspiration for the project he had at heart.

Appointed Principal of the Oriental College at Lahore, Stein at once grasped the opportunity to equip himself for his great career, alike by study and by field-work in Kashmir and on the Northwest Frontier. Those who knew him at that time were impressed not only with his intense absorption in the field he had chosen for his life's work, but by the determination with which he sought from the authorities in India and England the necessary assistance in carrying out the scheme of exploration he set before them. In 1900 his efforts were successful, and he was given the mission of exploring the sand-buried ruins of Khotan in distant Chinese Turkestan. Many years later, the aged British Agent at that city told me that he had purchased manuscripts and other treasures from these areas, which had been deserted owing to the failure of the rivers to reach them with their life-giving water. These finds the Agent had sent to his brother at Leh, whence they had reached the Museum at Calcutta. There Stein had seen them, and had realized their immense importance. This, his first expedition, was conspicuously successful.

In his second expedition of 1906–1908, sanction for which he had gained with the same indefatigable determination, Stein traversed Chinese Turkestan and crossed the dreaded Gobi Desert to the borders of Western China and Tibet. Here he secured results of great historical importance by the discovery of the ancient Chinese fortified wall, which he followed for some 200 miles. He also gained access to, and possession of, a great deposit of ancient manuscripts and art relics. Unfortunately, in the ascent of a mountain in Tibet, which rose to an altitude of 20,000 feet, he suffered from frostbite, and finally the toes of his right foot had to be amputated.

Stein's reputation was now assured, and among the awards which he especially valued was the Founder's Medal of the Royal Geographical Society. Some years later he was honoured by the award of the K.C.I.E.

In 1912 Stein started on the third of his great journeys. After further exploration in Western China he stayed with me at Kashgar, where I was acting as Consul-General, and, later, I met him on the Pamirs. This journey, the longest he undertook and geographically perhaps the most important, lay through the trans-Oxus provinces which had been surrendered to Russia some years previously by the Amir Abdur Rahman and were little known. From Russian Turkestan Stein entered Persia, and after discovering valuable frescoes in historical Sistan, he finally reached Quetta, thereby accomplishing a journey of some 11,000 miles. His archæological collections, most of which I had despatched for him from Kasgar, filled 182 cases.

A few years later Stein identified the fortress of Aornos in the Swat Valley. This, the site of a famous

feat accomplished by Alexander the Great, had deeply interested the late Sir Thomas Holdich and many frontier officers, but at that period the area was strictly "out of bounds." I recollect Stein telling me that this discovery was the one that was nearest to his heart.

Yet it would perhaps be true to say that for him his last important discovery eclipsed even the identification of the Aornos. In the seventh century of our era, the famous Chinese traveller Hsuan-tsang, in the classic record of his long journey, described his adventurous march down the gorges of the Indus. To quote his description: "The roads were very dangerous and the valleys gloomy. Sometimes one had to cross on rope bridges, sometimes clinging to chains." It might well have been thought that an explorer approaching eighty years of age, with the toes of one foot lacking, would have hesitated to travel by "the Route of Chains." But, indomitable as ever, Stein was determined to follow in the footsteps of one whom he was wont to describe as "his Chinese Patron Saint," and his successful accomplishment of this feat was, as might well be imagined, intensely gratifying to him.

As one who has learned much from him personally and from his invaluable publications, and who has travelled widely in some of the countries he explored, it is my definite opinion that Stein undoubtedly ranks among the greatest explorers of all time. He brought to his task not only a unique equipment of historical and archæological knowledge, but a systematic and scientific method of approach, which enabled him to overcome the physical obstacles of travel, and gave a unique value to his record of the results. But this is not all. With unfailing resolution he combined also a tact which greatly smoothed his path in dealing with Oriental authorities, and a simplicity of character which will leave an enduring memory in the hearts of his many friends. But, in their regret for his loss, they have at least the solace of reflecting that his end was one which he might well have chosen for himself. They know of his lifelong desire to be permitted to carry out exploration in Afghanistan—a desire which had more than once been frustrated when it seemed that he was about to achieve it. When at last the chance presented itself he set out immediately for Kabul. His death there cut short his project, but as he himself said in a parting message to a friend, he "had had a wonderful life and it could not have been more happily concluded than in Afghanistan." FINIS CORONAT OPUS. P. M. SYKES

Ernest J. H. Mackay.—An obituary of this versatile archaeologist appears in *BMFA.* xli, 1943, p. 76. Born in 1880, he died at his home in England on October 2, 1943. His archaeological work began in Egypt in 1907, where he was active in the field until 1916. After service in the British Army during the First World War, he went to Palestine in 1919 as Custodian of Antiquities for the Palestine Government, where he remained till 1922. From that year till 1926 he was in charge of the Field Museum and Oxford expedition to Mesopotamia. In 1935–36, under the auspices of the Museum of Fine Arts in Boston and the American School of Indic and Iranian Studies, he directed excavations at Chanhu-Daro in the Indus valley, a site dating from the third millennium B.C. His discovery of an engraved shell in his work in India led to the suggestion that the decimal system may have originated there.

Gustave Adolphus Harrer.—*CJ.* xxxix, pp. 323–325, prints an obituary of this eminent Latinist by J. PENROSE HARLAND. In the archaeological field he was best known for his work in Latin epigraphy, and his doctoral dissertation, *Studies in the Roman Province of Syria.* Born in Brooklyn, N. Y., on May 14, 1886, he was graduated from Princeton in the Class of 1910, and received his Ph.D. degree from the same University in 1913. In 1915 he went to the University of North Carolina, and remained there till his death on November 26, 1943, except for the year 1922–23, when he went to the American Academy at Rome for a year of study. His best work was as a teacher, and many pupils of his graduate courses all over the country owe their competence to his training.

Arthur Fairbanks was born at Hanover, New Hampshire, November 13, 1864, and died at Cambridge, Massachusetts, January 13, 1944. A graduate of Dartmouth College in the Class of 1886, he later studied at the Yale Divinity School, the Union Theological Seminary and the University of Berlin, and took his Doctor's degree at Freiburg-in-Breisgau in 1890. Except for the year 1898–1899, when he was a Fellow of the American School at Athens, he taught from 1890 to 1907 at Dartmouth, Yale, Cornell, the University of Iowa and the University of Michigan, in the two latter posts as Professor of Greek Literature and Archaeology. From 1907 to 1925 he was Director of the Museum of Fine Arts in Boston, Massachusetts, and after his retirement from this position served for five years as Professor of Fine Arts at Dartmouth College.

The breadth of Fairbanks' interests is apparent in his published works, which include: *Introduction to Sociology,* 1896 (second edition, 1901); *The First Philosophers of Greece,* 1898; *A Study of the Greek Paean,* 1900; *The Mythology of Greece and Rome,* 1907; *A Handbook of Greek Religion,* 1910; *Greek Gods and Heroes,* 1915; *Greek Art, the Basis of Modern European Art,* 1933; as well as

translations of Riehl's *Introduction to the Theory of Science and Metaphysics*, 1894, and Philostratus' *Imagines*, 1931.

In the field of archaeology, his most important contributions are two volumes on the *Athenian White Lekythoi* (1907, 1914) and the first volume of the *Catalogue of Greek and Etruscan Vases in the Museum of Fine Arts* (1928).

To a wide acquaintance with the literature and monuments of ancient Greece and Rome, Fairbanks brought the added insight which came from his early interest in sociology and religion. Among his younger colleagues he will be remembered as one who was always ready to share his knowledge and to help them with their problems.

GEORGE H. CHASE

A brief tribute to Dr. Fairbanks will also be found in *BMFA*. xlii, 1944, p. 20, and on the same page will also be found an obituary of Charles H. Hawes, Assistant and Associate Director under Dr. Fairbanks, who died on December 13, 1943, exactly one month to a day before Dr. Fairbanks.

GENERAL AND MISCELLANEOUS

New Journal.—We welcome a new journal to the numismatic field, the *Numismatic Review*, a Scientific Digest pertaining to Coins, Medals, and Paper Money, published quarterly, at 12 West Forty-sixth Street, New York 19, New York. The Editor is Thomas Ollive Mabbott, already widely known in numismatic circles, and the Associate Editor, Hans Holzer. Agnes Baldwin Brett heads an impressive list of Advisers.

The new periodical, as its Editor states in his salutatory preface, sets out to provide "a channel for the publication of serious and authoritative articles by specialists in every field. It is not our purpose to rival or supplant other periodicals, but while taking all matters of numismatic interest for our field to devote our pages mainly to what other periodicals at present do not cover, or cover only incidentally. In some senses it is hoped to revive some of the virtues of the old *American Journal of Numismatics*."

A glance at the Table of Contents of Vol. 1, No. 1, June 1943, reveals the following articles of interest to the classical numismatist:

AGNES BALDWIN BRETT writes on Philip of Macedon's race horse, winner at the Olympic Games, 356. This is the horse depicted on the silver staters issued by Philip.

EARLE R. CALEY discusses the earliest use of nickel alloys in coinage, reviewing the results obtained 75 years ago by the English chemist, Dr. Flight, with the analysis of certain coins of Bactria, and contributing the results of certain investigations of his own on other Greek coins with nickel and copper content.

ANNALINA C. LEVI shows the dependence of Roman minor arts, e.g., the making of cistae, cake moulds, lamps, jewelry, *et cetera*, on contemporary coin types.

HANS HOLZER contributes a Numismatic History of Karnuntum, a city on the Danube in Pannonia, that reached its height of importance in 260 A.D. He has done an excellent piece of work. There are also articles of varied interest and importance in other fields. Of outstanding value is Rentzmann's Numismatisches Legenden-Lexikon (1865 and 1878), translated and brought up to date. This Lexikon gives the names of the rulers of the Western World during the Middle Ages up to the present time. It will appear in the *Numismatic Review* in several instalments.

Dr. Mabbott is to be congratulated on his new venture. In the words of the Greek blessing invoked upon infant children, "May it live!"

Cambridge.—In *AJ*. xxiii, 1943, pp. 34–41, D. H. S. FRERE describes flints, molluscs, bones and pottery of the late Neolithic period found three miles south of Cambridge. The pottery is Grooved Ware similar to that of Clacton. Of interest are the shell fragments used in the clay as backing or as grit.

Brochs.—In *AJ*. xxiii, 1943, pp. 19–25, A. GRAHAM lists 503 brochs and broch sites in Shetland, Orkney, Northern Mainland, West Coast, Inner Islands, Outer Islands and Central and Eastern Mainland. 305 of these are still in existence.

The Elephant in Ancient War.—In *CJ*. xxxix, pp. 257–269, RICHARD GLOVER has a very interesting paper discussing the use of the elephant by the armies of the Hellenistic Greeks, the Carthaginians, and the Romans. The first battle in which superiority in elephants won the day was that of Ipsus in 302 B.C. From that time on, until the middle of the first century B.C., the elephant became one of the regular arms of Mediterranean war. His function was not, as many commentators suggest, allied to that of the tank today, but rather as a form of heavier shock cavalry—his shock value was far more powerful than that of the horse, and he had important weapons of his own in his heavy feet and tusks. Sometimes he carried armed riders in a howdah (or "tower" as

the ancients called it), but more often he just had a mahout or driver to guide him into battle. The elephants of Carthage do not seem to have had towers. The defeat of Regulus by the Carthaginians in 225 B.C. in which the elephants were in charge of a Spartan mercenary, Xanthippus, was the most costly ever due to elephants — only 2,000 Romans escaped. The best generals always employed elephants in mass formation, in the center if they had a large number, otherwise on one or both flanks; their distribution was costly to their employers as it deprived them of their shock value. The weakness of elephants as an offensive weapon was that they could not be engaged against an entrenched enemy, and that, when wounded, they were apt to stampede to the rear and destroy the troops of their own side. Incidents of victories of troops without them over enemies supplied with them are those of Alexander the Great on the Hydaspes, and Scipio over Hannibal at Zama; and yet, owing to their ingrained conservatism, the Romans did not adopt elephants as weapons of war until after that battle, and never showed much interest in them. The Indian elephant was considered superior to the African, owing to his short, thick legs and more compact and powerful frame. In every case, however, the mahouts appear to have been of Indian stock.

The Illyrian Language. — *Harv. St.* liii, 1942, prints a summary of a doctoral dissertation on this subject by PAUL ROBERT MURPHY. Our knowledge is based on one inscription, and a number of personal and local names, and the language has never received a really comprehensive treatment. It would appear to have some relation to the Messapic and Venetic languages, and comparisons of vowel and consonant pronunciations are given. Finally, the author adds a few new words to the thesaurus of Illyrian and its dialects.

EGYPT

Egyptian Portraiture. — DOWS DUNHAM contributes to *BMFA*. xli, 1943, pp. 68–72 (8 figs.) a discussion of portraiture in the Old Kingdom, illustrated by examples in the collection of the Museum of Fine Arts in Boston. He believes that perhaps the best way to understand the "social background, and the physical and psychological environment of the Egyptians who lived when the Pyramids were new" is by this means, as in the Old Kingdom Egyptian art was relatively unaffected by external influences. But whereas portraiture today is addressed to others than the person portrayed, in that period it was primarily addressed to the subject, and went into his tomb with him. In every case, it was intended to be a true likeness. It is pointed out that "the great works by which Egyptian art should be judged are rare" and that a useful purpose may be served by singling out some of the best portraits that have come down to us to show what the Egyptian portrait sculptor was capable of achieving. All the objects here published belong to the Fourth Dynasty (2680–2560 B.C.) and fall into two groups; first, private individuals, high officials, or princes, and second, kings and queens. Of the first class, five examples are shown, the most interesting being the famous bust of Ankhhaif, which Dunham considers "the supreme example of realistic portraiture which has survived from Egypt." Of the second group, all objects illustrated are statues of Mycerinus, and the artist sought to blend the human with the divine, as the king was regarded not as a man like other mortals, but as a god, who, living for a time on earth, passed at death into the company of the other gods. Of this attempt to blend these two conceptions, the colossal alabaster statue of Mycerinus in the Museum is perhaps one of the most successful; while the famous statue of this ruler, with his queen, made when the king was more advanced in years, is also remarkable for suggesting this same idea, and for the superb quality of the queen's face, embodying the Egyptian ideal of feminine beauty and dignity.

MESOPOTAMIA

Oriental Seals in Toronto. — The collection of ancient oriental seals in the Royal Ontario Museum of Archaeology in Toronto is very representative, with examples ranging from Jemdat Nasr times (ca. 3400 to ca. 3000 B.C.) down to the late Arab period. Most of the seals were purchased from dealers at various times and places; the provenance is therefore unknown, and they can be dated only by comparison with seals of known date. The 85 seals, including a dozen forgeries, are published by THEOPHILE JAMES MEEK in *Berytus* viii, 1943, pp. 1–16. Photographs of the actual size of the seal impressions are given in each case, and in addition twelve of the seals are enlarged by a new process: moulds are made in liquid latex rubber, and are then enlarged to approximately twice the original size by

immersion in kerosene, thus bringing out details far more satisfactorily than can be done by enlarging photographs.

Tell al-'Uqair.—SETON LLOYD discusses in *PEQ.*, July-Oct., 1943, the excavations which were made at Tell al-'Uqair in the years 1940–41; this site is located a little to the north of Kutha. At that place there was unearthed a prehistoric temple of the Uruk period (ca. 3800 B.C.). It stood on a high D-shaped platform. Four of the surviving chambers and more than half of the central hall had their walls ornamented with brightly colored frescoes. Both temple and platform were built of rectangular sun-dried bricks; the façades of both were ornamented with alternate buttresses and recesses. The frescoes were painted in several colors on the soft mud-plaster of the interior faces, with a preliminary ground work of white. It is very difficult to recover more than a limited number of the designs, since the whole building had been filled in solid with heavy brick work to make a foundation for a new temple.

Adjoining the platform on one side was discovered a subsidiary chapel of the Jemdet Nasr period. At another part of the site were excavated buildings of sun-dried brick of the al-'Ubaid period, and here was obtained south Iraq painted ware with fine conventionalized pictures of animals and birds.

In an addendum to the article S. W. PEROWNE notes that the temple at Tell al-'Uqair bears a striking resemblance to that of Beihan in the Aden Protectorate; this latter structure is built of stone and may be based upon a brick original of the type of temple at Tell al-'Uqair. Perowne in 1940 saw the remains of exactly similar buildings unearthed at Axum in Ethiopia. The earliest known date for the Beihan temple is its restoration by King Shahr Geilan ca. 900 B.C. Perowne concludes: "Is it possible that we have in the Beihan temple another link with the Mesopotamian and Southern Arabian cultures?"

Dura-Europos.—The recently discovered trilingual inscription of Shapuhr I is an important addition to the relatively scanty sources for the history of the Roman Empire in the mid-third century. It gives a brief summary of the political, religious, and military activities of the Sassanian king, and has aptly been called the *Res Gestae Divi Saporis*. The military section records only three episodes in his long struggle with the Romans: (1) a victory over the army of Gordian III and subsequent treaty with Philip (A.D. 244), (2) his first invasion of Syria and Asia Minor, and (3) his victory over Valerian at Edessa, his capture of the Roman Emperor, and the following invasion of Asia Minor (A.D. 259/60).

The first and third of these campaigns can be identified with the help of other sources. The second is more difficult to identify and date, and is the subject of a long and important study by MICHAEL I. ROSTOVTZEFF in *Berytus* viii, 1943, pp. 17–60. Shapuhr speaks of defeating a Roman army at Barbalissus (a battle not otherwise recorded), and then lists the cities of Syria, plus a few in Cappadocia, which he sacked. The list includes Antioch and Dura, but not Hemesa; from it, it is possible to trace the course of the military operations, and it is evident that the campaign was a hurried one, conducted for prestige and booty, with no time for lengthy sieges. The raid came, not from northern Mesopotamia, as was the case in 260, but from the south, up the right bank of the Euphrates.

The only literary accounts which help in placing this first invasion are those which were written by Syrians or which seem to depend on Syrian sources; the most important are *Oracula Sibyllina* xiii, Zosimus, and Malalas, and even here the narrative is confused and at times contradictory. However, a number of coincidences with places or events mentioned in the inscription make it possible to disentangle the story and to place the invasion and the first capture by the Persians of proud Antioch in the year 253 and before the accession of Valerian. In the general history of the Roman Empire, the events of 259/60 were far more important, and it is not surprising that other and summary historians say not a word which can be referred to the first invasion. The "Syrian" group of writers, however, were tremendously impressed by the first capture of Antioch, more than by the later defeat at Edessa and its aftermath—the writer of the *Oracula Sibyllina* xiii does not even allude to the capture of Valerian! At the same time, Syria was not hostile to Rome, and hence the Roman defeat at Barbalissus was, tactfully, not recorded, though without it the invasion of Syria would not have been possible. This parochial interest accounts also for the stress laid on the stories of Mareades, the traitor of Antioch, and of Sampsiceramus, who frustrated Shapuhr in his attack on Hemesa (in Shapuhr's list of cities taken, Hemesa is significantly missing).

Briefly, the course of events may now be summarized as follows. During the reign of Philip,

there were no military operations in Syria or Mesopotamia. In 252 Shapuhr moved against Nisibis, but was unable to make progress in that quarter, and so attacked Syria in the next year by the Euphrates road. When the Roman army was defeated at Barbalissus, there was no way of preventing the invasion of Syria, and it is probable that the garrison of Dura withdrew to the more strongly held left bank of the Euphrates. Still Shapuhr had no time to waste in sieges, and the cities he took he plundered but did not occupy. Late in 253 or early in 254 Valerian arrived and restored order. Probably in 256 Shapuhr moved again and after a siege took Dura, but was repulsed by Valerian (witness the title *Parthicus* which Valerian assumed in 257). Then came the momentous happenings of 259/60, the defeat of the Romans, the capture of Valerian, and the emergence of Odenath, prince of Palmyra, as the Syrian hero.

What of the numismatic and archaeological evidence for this reconstruction? Because in 258/9 the operations of the Antiochene mint were suspended for the rest of Valerian's rule, Alföldi assumed that Antioch was captured by Shapuhr in that year, as well as in 253 and 260. However, with the evidence of the inscription, it is now clear that Syria was invaded only twice by Shapuhr, and the supposed capture of Antioch in 258/9 therefore disappears.

At first sight, Dura provides no apparent support for Rostovtzeff's reconstruction of events: life in Dura in 253, and up to 256, seems to have been "comparatively quiet and undisturbed by disastrous events," and there is evidence for continued commercial relations between Persia and Dura at this time. Yet it seems clear that the Barbalissus expedition, in which Dura was taken, is identical with the invasion recorded by the historians, during which Antioch was first captured by the Persians, and this can have taken place only in 253.

The solution may be that Dura was occupied only briefly, and without a fierce struggle, perhaps on the withdrawal of the Roman garrison. The early evacuation of the town by the Persians may have been the result of the defeat of Shapuhr's southern army near Hemesa by Sampsiceramus, and of Odenath's activities. Two drawings found at Dura are of interest in this connection. The first, in Iranian style, depicts the victory of a Sassanian king over the Romans. Such a scene could not normally be depicted in Roman Dura, but if it were done during the occupation of 253, its obscure position in a private house might have enabled it to pass unnoticed during the period before the final siege of the city. The other, found in the office of the *actuarius* of the xxth Palmyrene cohort, represents a Roman officer sacrificing to the Palmyrene god Jarhibol, while a noble Palmyrene, on horseback, receives tokens of honor and greeting. Rostovtzeff had previously explained the scene as a sacrifice to the victorious god of Palmyra in the presence of Odenath on the occasion of his visit to Dura after his great victories over Shapuhr in 260. It is now known that the drawing was buried from the time of the siege of 256; hence Rostovtzeff now refers it to the events of 253. If this is accepted, and it seems almost beyond dispute, it is a welcome confirmation of his closely reasoned thesis.

The numismatic evidence from Dura for this period is discussed by A. R. Bellinger in *Berytus* viii, 1943, pp. 61–71. The latest issues of Trebonianus Gallus, both tetradrachms and Antoniniani, though bearing the officina marks characteristic of the mint of Antioch, differ from the usual types sufficiently to suggest a difference of mint. The capture of Antioch in 253 would be an obvious occasion for this transference of the mint to a safer place. The rare tetradrachms of Sulpicius Antoninus, issued at Emisa in 253/4 are patent imitations of the tetradrachms of Gallus, and the likeliest explanation is that they are the work of the same die-sinkers. Hence we may conclude that in the last year of Gallus the mint was moved from Antioch to Emisa. When the imperial power in Syria collapsed with the fall of Antioch, a pretender, for a brief period, carried on at Emisa the imperial functions, and issued coins closely patterned on those of his predecessor. It is probable, though not certain, that this Sulpicius Antoninus is the Sampsiceramus famous for his defense of Emisa against Shapuhr.[1]

The possible capture of Dura in 253 is strongly supported by the fact that six hoards of coins give evidence of having been buried in that year, as against five buried in 255/6 when we *know* the town was taken.

Finally, Bellinger here analyzes the evidence of the coins found in hoards dating from the last siege of Dura, or discovered with the corpses of soldiers killed in the fighting. This study leads to a number of modifications in the conclusions reached by Alföldi. The suggestion of Olmstead

that the second Syrian mint of Valerian was at Emisa appears more than ever probable.

PALESTINE AND SYRIA

Primitive Weaving.—In an article on "Handicrafts in Palestine" (*PEQ.* July–Oct. 1943), GRACE M. CROWFOOT discusses primitive weaving (plaiting and finger-weaving) in Palestine and neighboring countries and makes comparisons with the same stage in other parts of the world. Four plates of illustrations are given.

Sodom and Gomorrah.—J. PENROSE HARLAND concludes his study of the "Cities of the Plain" in *Bibl. Archaeologist* vi, 1943, pp. 41–54 (5 figs.). This article deals with their destruction. After a brief summary of the contents of his first paper, about their location (*ibid.* v, 1942, pp. 17–32, summarized in *AJA*, xlvi, 1942, p. 552) he shows that the catastrophe that caused the destruction of these cities could have been no ordinary conflagration, but "so great and so awful that the memory of it remained fixed in men's minds." Harland first considers the Biblical evidence, the first reference being in *Gen.* xiii, 10. Next come the eighteenth and nineteenth chapters of *Genesis*, where it is stated that not even ten righteous men could be found in Sodom, while apparently there was no such search made in Gomorrah, Admah or Zeboiim, for none of which cities does Abraham make any plea. The destruction of the cities is described in *Gen.* xix, 24–28. There is no possibility of volcanic activity in this region, to account for the heavy smoke that accompanied the conflagration. The evidence of later writers is then discussed. Strabo (xvi, 2, 42–44) has much to say about the Dead Sea, notes the presence of asphalt in the region, and speaks of the existence at that time of scorched rock—which seems to be based on the report of an eye-witness. Another later writer, Philo Judaeus, mentions the destruction of Sodom and Gomorrah, but his account is unreliable. More important is Josephus (iv, 476–485), who describes the Dead Sea, its output of asphalt, and is the first, apparently, to mention the Dead Sea fruits. It would appear that he had visited the region, as he speaks of remains of the cities being visible, from which it is evident that in the first century of our era the entire plain was not under water. Tacitus (*Hist.* v, 7), relying on accounts of travellers, mentions that the region had lost its fertility. Diodorus, Strabo, and Tacitus all speak of foul odors coming from the bitter waters of the Dead Sea, and that when asphalt is about to be forced to the surface the people are warned of it by these odors. This suggests the presence of gas in antiquity—in recent years these gaseous emanations (perhaps derived from sulphur) may have become exhausted.

As a result of the statements in *Genesis* and in later authors, Harland reconstructs the story of the destruction of the cities as the result of earthquakes, accompanied perhaps by lightning, causing a terrific conflagration from ignition of gases and seepages of asphalt. Earthquakes are frequent in this valley, and seepages of asphalt and bitumen abundantly evidenced by ancient tradition and modern record. The gaseous fumes may have come from deposits of oil or petroleum, and an article on the geology of the Dead Sea by B. K. N. Wyllie (in *Geological Mag.* 1931, pp. 366–372), a geologist of the Anglo-Persian Oil Company, suggests that oil was expected to be found in Palestine. Josephus notes (iv, 478) that the waters of the Dead Sea change in color during the day, which is believed to be due to a thin layer of oil on the surface of the water. This is confirmed by numerous authorities, who agree that oil is to be found in this region. The best case for oil as a contributing cause for the destruction of the cities is given by the late Frederick G. Clapp* (*AJA.* xl, 1936, pp. 323–344, and *Bull. Am. Assn. Petroleum Geologists* xx, 1936, pp. 881–909), from whom Harland quotes in detail.

A section of the article is devoted to the so-called "Apples of Sodom," an inedible fruit. In *Deut.* xxii, 32, mention is made of the "vine of Sodom" whose "grapes are grapes of gall." These grapes are, according to Harland, not to be associated with the vine of Sodom, which is identified in the Oxford *Concordance* as the *colocynth*, a form of melon, which has a fruit resembling an orange in appearance, but bitter to the taste. In *Wisdom* x, 7, this fruit has become a tree fruit. Josephus intimates that he saw it with his own eyes, and Tacitus quotes fellow-Romans who described it to him. Fulcher of Chartres, the historian of the First Crusade (1095–1099) also describes this fruit as one who has seen it. Sir John Mandeville, who travelled in the Near East from 1322 to 1356, and wrote a totally unreliable account of what he saw, nevertheless seems to have visited the southern end of the Dead Sea, and describes quite recog-

* Died, February 18, 1944.

nizably the "Apple of Sodom." In 1848, Lieutenant W. F. Lynch, USN, describes "a species of melon" brought to him, which was, of course, a *colocynth*. In 1924 Dr. Kyle had experience of both the "apple" and the "melon"—the apples are called "osher" by the Arabs, and it is believed that the "ashes" with which the apples are sometimes filled are the result of attack by insect pests. A brief note is then given of the subsequent history of the Plain, which has been submerged as a result of earthquakes and the natural rise in level of the Dead Sea. The region has not been reinhabited, owing to these phenomena and for religious reasons, making it, in the words of Albright, "a terrible memorial of human wickedness and the wrath of an angry God." Finally, Harland discusses the question of oil in Palestine, which is proved to exist, but it is not yet revealed whether the commercial possibilities are of great significance, although one is left with the impression that they are.

Hebrew Coin.—A. REIFENBERG in *PEQ.*, July–Oct., 1943, discusses a Hebrew coin of the fifth century B.C., which is said to have been found in the vicinity of Hebron. It is described as AR 16 mm.; 3.88 grm. On the obverse is a male bearded head facing the left; the eye is full. The hair is partly shown by granulated lines and is taken up in a knot at the back. On the reverse appears a female head facing the right; it may be Aphrodite-Astarte. The eye is full, and the hair falls in a club on the back of the neck. She wears an ear-ring, which is the letter *'ayin;* the ear-ring forms the last letter of the word *beqa'* (half shekel).

The coin is of about the middle of the fifth century B.C. It seems to be an imitation of the Attic standard of a drachma (maximum 4.36 grm.). The Athenian silver money had become almost an international currency in the fifth century and was accepted by both Greeks and non-Greeks in preference to all other coins. It seems that the Attic coins were imitated in other parts of the world. The heathen character of the coin in no way disproves the assumption that it was struck by a Jewish authority. Reifenberg assumes that the coin came from a Jewish mint, and he suggests that it was struck under the authority of Nehemiah, who reduced the temple tax from half a shekel to one third. The old shekel weighed approximately 12 grams; the light stater of the Attic standard which found its way into Palestine by the fifth century weighed only about 8 grams. Reifenberg concludes accordingly that this coin represents one half of the Attic standard, or approximately one third of the old standard. He thinks that this *beqa'* explains the change in the temple tax (*Neh.* 10:32). This coin is not only the oldest Hebrew coin, but is also likely to shed some light on the period of Nehemiah.

Lachish.—DAVID DIRINGER, in *PEQ.*, July–Oct. 1943, discusses three ostraca with inscriptions. While the inscriptions are too fragmentary for interpretation, they are of importance for studying the forms of certain letters of the alphabet. Two plates with the transliterations are given.

The Ten Lost Tribes.—H. G. MAY has a short paper on this subject in *Bibl. Archaeologist* vi, 1943, pp. 55–60 (2 figs.). After a résumé of some recent efforts to solve the problem, in which the results are negative, the writer discusses the theory, many times advanced, that the Anglo-Saxons are the ten lost tribes. The absurdity of this theory is abundantly demonstrated, and it is shown that the "Stone of Scone," which forms the seat of the Coronation Chair in Westminster Abbey, and which is claimed to be of Judaean origin, is of a form of sandstone never found in Palestine, but common to the west coast of Scotland. It is further proven that what exile there was (namely, from Samaria) was not in the reign of Shalmanezer V, as the Anglo-Israelites claim, but occurred in the reign of Sargon, in 721 B.C. Even then it was not the entire territory of the ten tribes that he conquered, and his deportations, even when combined with those of his predecessor, Tiglath-Pileser III, were relatively small. In other words, the ten tribes as such were never exiled, and continued for the most part in Palestine, so that they were never "lost." Of those few Israelites who were exiled, archaeology provides several hints as to what happened to them. A letter to an Assyrian king mentions two officials in Gozan, who were possibly Hebrews from Samaria. A group of cuneiform texts from Kannu in Mesopotamia, dating in the seventh century B.C., dealing with the transfer of slaves, mentions names almost certainly Hebrew, who were perhaps exiles from Samaria. Finally, Aramaic papyri of the fifth century B.C. have been found at Elephantine in Egypt, dealing with a Jewish colony there, who speak of themselves as Judaeans. In the previous century, refugees from Bethel appear to have joined, and been absorbed by, the Jews already there. As is well known, the

prophets of the Old Testament frequently predict the return of Israel, as well as Judah, from exile, but "we cannot say whether the prophets actually knew any Israelitish exile."

Ras Shamra.—In his publication of the Mitannian battle axe of iron found at Ras Shamra, Schaeffer relied chiefly on a brief report by Brun for his technical data. HARRY CRAIG RICHARDSON, *in Berytus* viii, 1943, p. 72, points out certain gaps in that report, and calls for a thorough metallographic examination. Despite the low nickel content, it is improbable that the iron was made from pyrrhotite ore, as Brun suggested. To make iron from that requires a special operation to eliminate sulphur, and it is easier to assume that the iron is meteoric.

AEGEAN

Alleged Fortifications, Cnossus.—In a note in *JHS.* lxii, 1942, pp. 84–85, A. W. LAWRENCE contends that the military aspect of the succession of buildings by the north entrance, which faced the sea and the greatest potential dangers, has been overstated. The "keep," so-called by Sir Arthur Evans, is an isolated block, stretching between the north and central courts, and dated soon after the beginning of the M.M.I. period, with the foundations showing pits 7 m. deep, probably intended for cisterns. The whole area may be interpreted as a subterranean reservoir, from which water could be drawn from mouths in the ground floor, which consisted of small rooms accessible from both the north court and the central court of the palace, while an upper floor comprised larger rooms and conceivably a portico against the north face, open to the sea breeze. The elevation may be visualized from the faience tablets of the "Town Mosaic." The north entrance, Lawrence likewise believes, seems to be meant only to impress, like the monumental gateways of modern buildings that fulfill the same functions of palace or government offices.

GREECE

GENERAL AND MISCELLANEOUS

"Scientific Ionian Philosophy."—To the question "was the Ionian philosophy scientific?" F. M. CORNFORD in *JHS.* lxii, 1942, pp. 1–7, gives the answer that it is a mistake to assume that the empirical theory of knowledge governed the speculations of ancient Ionia. The problem is concerned with the puzzle of why the Ionians not only describe with complete confidence matters beyond the reach of observation, such as the origin of the world, but when they come to matters of detail, they make assertions that could have been upset by a little careful observation or by the simplest experiment. Cornford suggests that the key to the problem lies in a difference of attitude toward the question of sources of knowledge, the distinction between the methods of medical science and those of philosophy. The philosopher descends from above to deduce the nature of man from unproved postulates, the physician builds up his theory, generalizing from observed facts. These two approaches are reflected in two opposite accounts of the sources of knowledge. The empirical theory of knowledge, set forth by Aristotle, starts with the senses, and in the higher animals sensation gives rise to memory. In man repeated memories of the same thing result in unified experience, from which come generalization and knowledge. This point of view was formulated when the doctors, under the influence of Ionian nationalism, were freeing their art from its magical phase. The alternative theory of the sources of knowledge was formulated by Plato, and in Cornford's opinion, is the older of the two. It accounts for the dogmatism of the philosophers and rests on a very different conception of the nature and contents of memory. The imagery of the *Phaedrus* myth enables us to connect the theory of philosophic knowledge as drawn from memory with prophetic enthusiasm and the inspiration of the poet. It comes as a revelation. To understand the attitude of the early philosopher we must see him as emerging from the composite picture of seer, poet, and sage. The philosopher thus appears as the rationalizing successor of the poet-seer, relying at the outset on the traditional wisdom, confirmed by his own inward conviction.

Scenes from Euripides on Bactrian Silver.—Three "Bactrian" silver bowls with scenes on their outer surfaces are published by KURT WEITZMANN in *The Art Bulletin* xxv, 1943, pp. 289–324. Two of the bowls are in the Hermitage in Leningrad; the other is in New York. In shape and type of decoration the bowls resemble the clay "Megarian" bowls. Weitzmann believes that the three silver vessels were derived from one group of Megarian bowls, the so-called "Homeric bowls," which were adorned with scenes from epic poems and dramas. The only dramatist represented on the clay bowls is Euripides, and this also appears to be the case with the silver bowls. The author interprets the figure groups on one

bowl in the Hermitage as representing scenes from the *Alcestis*, the *Alope*, the *Bacchae* and the *Ion*. The other bowl in Leningrad may bear scenes from the satyr play, *Syleus*. The scenes on the New York bowl are again from several different dramas, probably the *Mad Heracles*, the *Hippolytus Crowned*, the *Peliades*, the *Bellerophon*, the *Hypsipyle* and others. The relative proportion of pure Greek and Oriental elements in the treatment of the figure types, costumes, attributes, etc., serves as a basis for dating the silver bowls. A *terminus post quem* is, of course, established by the Megarian bowls in the third century B.C., and it is obvious that some time elapsed before the earliest of the silver bowls was made. The earliest of the three is probably the New York piece and other stylistic evidence would seem to indicate a date approximately at the beginning of the Christian era. In conclusion Weitzmann discusses briefly a fragment of a Megarian bowl found in an excavation in the Punjab near Peshawar. The scenes on it were identified by the excavator, John Marshall, as being from Sophocles' *Antigone*. Weitzmann believes that they may be rather from Euripides' *Auge*.

Graeco-Roman Shepherds and Art.—*CJ.* xxxix, pp. 366–368, prints an interesting note by E. L. HIGHBARGER, listing references to works of art in Virgil's *Bucolics*, the *Idylls* of Theocritus, and in the *Philebus* and *Phaedrus* of Plato, in the former of which dialogues allusion is made to a statue *made by shepherds* (the italics are the author's). He reaches the conclusion that both in the Greek authors and in Virgil we may see "reflections of actual life" and that they were "closer to daily life than we suspect."

Recent Gift to Metropolitan.—C(HRISTINE) A(LEXANDER) contributes a note to *BMMA.* n.s. ii, 1943, opposite p. 85 (fig.) announcing that the Metropolitan Museum has received as a bequest a small collection of antiquities, including eight sculptures, mostly Roman copies or adaptations of Greek types, one of which is illustrated, and all of which are briefly described. Besides the sculptures, the collection includes three small Attic lekythoi, and two Tanagra figurines.

The Philinna Papyrus.—P. MAAS in *JHS.* lxii, 1942, pp. 33–38, discusses the Philinna Papyrus (P. Amh. 11 and P. Berol. 7504), a text of two separate fragments, properly belonging together, and consisting of a collection of hexametrical charms, each of which has a title, indicating the name of the author, his or her nationality, the disease for which the charm is intended. No earlier collection of Greek charms is known and no similar collection. The name of the Thessalian Philinna, who gives the title to the payrus, is a typical female name, and does not help with the dating, but the character of the first and third charm does not point to a period earlier than Hellenistic.

ARCHITECTURE

The Ionian Agora.—The agora, the nucleus of all Greek cities, was in the beginning simply a convenient open space, around which buildings were irregularly placed. With the growth of systematic planning in Ionia a new type was evolved, and the old-fashioned agora and the Ionian agora existed side by side. F. J. Tritsch (*JOAI.* xxvii, 1932, pp. 64–105) has already given an account of the old type of agora, taking Elis as the best example. R. E. WYCHERLEY now undertakes in *JHS.* lxii, 1942, pp. 21–32, a brief general account of the new or Ionian agora, which he believes has not been given the place that it deserves in the history of Hellenic architecture. Since remarkable Hellenistic developments have been revealed in the agora at Athens, the question may well be asked whether the influence of new ideas and methods produced modifications of the older type there. The difference between the two kinds of agora depends on the treatment of the stoas, as Pausanias suggests. In the old-fashioned agora the buildings in general and the stoas in particular were irregularly placed and did not form an architectural whole, whereas, as Pausanias implies, the cities of Ionia and the Greek cities near Ionia were laid out and built according to a single scheme. In these the agora was distinguished by groups of stoas built contiguous to one another and the so-called horseshoe —three stoas at right angles—was favored, but there were variations and other possibilities. Before good examples were revealed by excavation it was often assumed that the ideal consisted of four stoas completely enclosing a rectangular space. This idea is now disproved. The horseshoe type, i.e. three stoas forming three sides of a rectangle, the fourth being occupied by an important street with public buildings or another stoa beyond it, was introduced on a vast scale at Miletus in the south agora complex in the course of the third century. Wycherley considers this agora, belonging to a great commercial city, along with that at Priene, an Ionian agora in a small

town, and that of Magnesia on the Maeander, which falls somewhere between the two. Finally he examines in some detail and in contrast the agoras of Pergamum, Hellenistic Delos, and Hellenistic Athens.

Stoas and City Walls on the Pnyx. – H. A. THOMPSON and R. L. SCRANTON publish in *Hesperia* xii, 1943, pp. 269–383, a full report of their excavations on the Pnyx, undertaken in 1936 and 1937. The first half of the report, dealing with the buildings, is handled by Thompson. An important new building was discovered, the West Stoa, southwest of the Assembly Place, 149.32 m. long x 19.30 m. wide. Nothing is left of the superstructure. Best preserved is the foundation of the stylobate, marked by a bedding prepared in front of it for the steps, and containing a series of rectangular pits, either cut into the rock or formed by omission of appropriate blocks from the foundation. Thompson believes that these were for basins in a gutter in front of the colonnade, and from their spacing concludes that 54 columns in antis were intended on the façade of the building. The stoa may well have had interior supports and may have reached two stories high. Possibly the stoa was never completed. Another building, partially studied in earlier campaigns, and then called the Long Stoa, is now called the East Stoa, because of its discovered relation to the West Stoa. Little new was uncovered for its early stages of construction, but it is supposed that it had 22 columns in antis, was one storey high with a series of rooms along the back. At the west end of the East Stoa a rectangular foundation, previously examined in part, is now thought possibly to have been a propylon, though the evidence is slight. The most important feature of the examination of these buildings is the new evidence for chronology. Whereas in earlier reports it was thought that the East Stoa dated from the first century A.D., it is now fairly definitely established that both stoas and related buildings were begun around the third quarter of the fourth century B.C. As the stoa group would appear to have an integral relation to the Assembly Place, it is suggested that the third period of the Assembly Place may be dated in this period, not that of Hadrian, as formerly supposed. It is possible that the whole complex of the Stoas and the rebuilding of the Assembly Place may have begun under Lykourgos about 330–326 B.C. The former attribution of the East Stoa to the Thesmophorion is now abandoned.

The second part of the report, handled by R. L. Scranton, is concerned with the city walls. The city wall from the monument of Philopappos to the Hill of the Nymphs was examined, and two major periods of construction and several repairs identified. The line of the fortification was originally a cross wall above the outer defenses and Long Walls in this area. The original fortification here was the Compartment Wall, now dated 307–295 B.C. The most significant features include a gate complex in the valley between the central Pnyx Hill and the Museum Hill, arranged as a dipylon with two heavy towers flanking an entrance to a rectangular court, closed at the rear by a gate between spur walls. On the slopes of the Museum Hill an interesting round tower was uncovered. The fortress, occupying the summit and northern slopes of the hill, presumably built by Demetrios Poliorcetes, was found to be part of the Compartment Wall. The second major construction is represented by a wall built of white poros blocks, across the crest of the central Pnyx Hill. For the most part it lies outside the line of the Compartment Wall. Well preserved in its foundation is a great semicircular tower of the westernmost projection. The wall is noteworthy for the systematic use of buttresses about 1.40 m. square, reinforcing the wall at intervals of ca. 4.60 m., the wall itself being only 2.00 m. thick. A postern gate was identified in the wall opposite the southwestern corner attributed to the propylon. An outer gate between the towers of the Compartment Wall dipylon was constructed at this time. On the ruins of this were found the iron pivot for the door, numerous studs and nails and other evidence for the construction of the gate door. Construction at the junction of the Pnyx wall system with the outer city fortifications at the top of the Museum Hill suggests that the outer line to the west was abandoned when the White Poros Wall was built, probably in the last quarter of the third century. Various repairs were identified, of which the most important are that of the late second or third century B.C., tentatively ascribed to Valerian in 253 A.D., and an elaborate reconstruction from the time of Justinian, when the whole system of towers was rebuilt. Some work in repair of the fortifications was also done in the latter part of the twelfth century. A number of graves, ranging in date from the fourth century to mediaeval times, are described, and a small sanctuary on the Hill of the Nymphs.

SCULPTURE

Athletic Honors.—In *CJ.* xxxix, pp. 278–289, GEORGE E. MYLONAS reconsiders the problem of the size of victor statues, and the honors awarded to victorious athletes, in the fifth century. This is due in large degree to the recovery of the bronze statue from the sea off the coast of Artemisium in 1926. This statue has usually been considered that of a god, but Jüthner (in *AM.* lxii, 1937, pp. 136–148) seeks to prove that it is of a victor in the pentathlon, citing the copy of the Doryphoros of Polykleitos in Munich, which is over life-size, as a parallel; but this analogy is of no merit, as other copies of this statue exist, which are of life-size or less. Hyde, in his *Olympic Victor Monuments*, considers that occasionally victor statues of over life-size were produced, but his evidence is not convincing, based as it is on statues now lost, and quotations attributed to Aristotle in scholia of Pindar. Mylonas shows, from a study of the manuscript tradition of Pindar that Hyde was following C. Müller (*Fragmenta Historicorum Graecorum*) in attempting to combine scholia of two families into one, which he proves is incorrect, and that a statement is arbitrarily attributed to Aristotle which he did not make. Thus literary and archaeological evidence does not indicate the existence of victor statues of over life-size, and it is highly significant that the only fifth-century victor statue which has come down to us in the original, the Charioteer of Delphi, is only 1.80 m. high, or about life-size. The honors bestowed on victorious athletes are fully discussed by Gardiner (*Greek Athletic Sports and Festivals*) and are listed by Mylonas, but there is no evidence that in the fifth century any divine honors were bestowed. Five great athletes of the fifth century are known to have been given divine honors, but an examination of the stories about them as given by Pausanias, shows that they were worshipped not because of their victories, but as retribution for wrongs sustained, or because of divine favor shown them, that had nothing to do with their athletic prowess. The most bitter opponent of athleticism in the fifth century, the philosopher Xenophanes of Colophon, has nothing whatever to say of divine honors accorded them—and this is significant, while honors are tacitly denied by Euripides, in a fragment from his lost *Autolykos*, in which he speaks of athletes in their old age as "worn-out garments." Nor would a deified athlete be ostracized by the Athenians, as the renowned athlete, Kallias of Athens, was. To sum up: literary and archaeological evidence alike denies athletes divine honors; their statues were of life-size, and only five out of a total of eight hundred received such worship, and that for quite different reasons.

The Harpy Tomb, Xanthus.—F. J. TRITSCH undertakes to interpret in *JHS.* lxii, 1942, pp. 39–50, the meaning of the Lycian sculptures from Xanthus now in the British Museum. The Harpy Tomb consisted of a square shaft in one block, 17 ft. high, placed on a base rising on one side 6 ft. from the ground, and on the other side but a little above the present level of the ground. Around the sides of the top of the shaft were ranged the basreliefs in white marble about 3 ft., 3 in. high. The east side of the tomb, with whose reliefs the present article is concerned, shows the stately figure of a bearded man enthroned and surrounded by four younger male figures. The relief seems to consist of two very different groups of figures. To the left, the three figures, one enthroned and two standing, are all in very rigid and formal attitudes, well wrapped up in long garments, and looking to the right. Even their gestures resemble one another and the movement of their right arms forming a circle with head and shoulder, has a crescendo effect, that is, grows larger towards the center. In contrast, the right-hand group is much freer in its movements and contours. There are only two figures, both worshippers of the central figure. Their arms are outstretched and pointing towards the center. One of these, a slender young boy, throwing back his head and lifting his eyes, stretches out his arms and brings a cock and fruit as offerings to the bearded old man before him, who, seated on his throne, seems to take no notice at all. The usual interpretation of the figures has been that of a god, frequently Poseidon, with attendants behind and worshippers in front. Tritsch argues that the clear connection of the left half of the relief with the Persian formal audience reliefs of the fifth century would indicate that the enthroned man on the Harpy Tomb, whether or not he wears the so-called Phrygian cap to show his position, is the ruler of Xanthus. He and his court ceremonial are represented on his tomb, on its east side, facing the agora for all his people to see. On the right-hand side of the relief the small figure is not a young boy, but a Persian noble, much reduced in size to show the king in turn as something more than mortal. The figure at the extreme right, a man with his dog,

like the so-called boy presenting an offering, is a favorite subject for tombstones in Greece. In this whole relief then the artist has presented on the left the traditional and very strictly observed features of the Lycian court ceremonial, which did not permit much freedom of movement, whereas the right-hand side shows the artist choosing with much more liberty the figures for some of the ruler's worshippers or courtiers, which are much more Greek in character. The left half of the relief reflects the more formal Oriental influence in art. In this instance we may see the east side of the Harpy Tomb as an excellent example of the way in which the Greekizing influence worked in the Near East.

The Laocoön Group.—Under the title, "Ignorance, The End," WILLIAM M. IVINS, JR., in a very interesting article in *BMMA.* (n.s. ii, 1943, pp. 2–10; 13 figs.) shows how differently the same object may appear to different artists, all "competent draughtsmen, each representing an object truthfully as he is acquainted with it." The piece under consideration is the Laocoön group. Illustrated are ten engravings, woodcuts, or etchings, dating from about 1500 up to 1890, and all showing very clear differences. Three photographs, one of the complete group, and two of the head of Laocoön, also show that even the camera can show different phases of the same thing.

VASES

The Kernos.—In *Harv.St.* liii, 1942, pp. 180–181, is printed an abstract of a doctoral dissertation by FRIEDA SCHAUROTH UPSON on *The Kernos in Ancient Cult.* The term *kernos* is derived from literary sources, and these sources are not in absolute agreement with each other. Nevertheless, archaeologists have identified as *kernoi* objects answering to literary descriptions, and a large proportion of these vessels have been found at Eleusis. Their use in the Eleusinian Mysteries is, however, not attested by literature. That the *kernos* was a cult instrument is shown by their discovery in Bronze Age sites of all periods. The earliest appear to be Cypriote, and to date in E.C. III; the latest are of the fourth century B.C. from Eleusis. Their distribution is widespread, not merely in Greek lands, but they have also been found in Egypt, Palestine, Asia Minor, Sicily and Carthage. All prove to be associated with the cult of a vegetation goddess, and it is possible to present evidence for their use in the Eleusinian Mysteries.

Corinthian Vases in Hearst Collection.—In *Univ. of Calif. Publications in Class. Arch.* i, pp. 207–240, pls. 28–32, D. A. AMYX makes a very detailed and careful study of five Corinthian vases in the collection of Mr. William Randolph Hearst at San Simeon, Calif. The first is a pyxis with three handles in the form of female busts, intact and with lid, said to have been found at Corinth. It was formerly in the Torr collection, which was dispersed in 1929, and is mentioned in Payne's *Necrocorinthia*, where it is assigned to the end of the Middle Corinthian period (580–575 B.C.), as an example of what Payne calls the Delicate Style. Comparisons of this vase with other examples in various museums are made in great detail, and an attempt is made to arrange the known pyxides of this form in chronological order. For the later Corinthian style, recourse is had to Jenkins in *BSA.* 32, p. 34 f. In this connection four vases in the Metropolitan Museum are published, which belong in the later style. The second vase is a flat-bottomed aryballos, which is placed in the earlier part of the Middle Corinthian period, by comparison with similar vases in various museums, listed for the most part by Payne. The writer stresses the connection between these flat-bottomed aryballoi and the plates of the "Chimaera Group" identified by Payne, and the two classes show such a contrast with the vases of the "Delicate Style" that Amyx calls them the "Heavy Style." An aryballos in Detroit is published for purposes of comparison. The third vase is a squat oenochoe, intact, and with its stopper preserved. It probably belongs in the end of the Middle Corinthian period, and shows marked differences in style with other vases of this shape. The fourth, a pyxis with lid, is by the same hand as pyxides in Boston (Fairbanks, *Cat.* no. 482, pl. 47) and Amsterdam, while related to this group are others in Bucharest, Berkeley, and the British Museum. This pyxis stands close to the work of the Dodwell Painter, and may be by an artist called by Amyx the Ampersand Painter—certainly the connection is very close. The last vase is a "bottle" of a form almost unique, belonging in the late Corinthian period, and is therefore later than most of the vases of this form which have been previously published. The final pages of the article (pp. 227–end) are devoted to footnotes to the text, very exhaustive and complete. In the beginning of the essay, Amyx states that he has "tried to make each piece yield some new knowledge of its setting" and "to interpret inde-

pendently and sympathetically the vases entrusted to me for publication"—and he may be said to have successfully accomplished his purpose.

Two Black-Figured Amphorae.—In *GBA.* ser. vi, xxiv, 1943, pp. 183–189 (6 figs.), DOROTHY KENT HILL publishes two Attic black-figured panel-amphorae in the Walters Collection in Baltimore, formerly in the Massarenti Collection in Rome, from which they were purchased by Mr. Walters in 1902. The first of these vases, which has on the obverse Herakles bringing Kerberos from Hades, with Hermes and two women in attendance, and on the reverse a scene tentatively interpreted as Herakles and Iolaos bringing Alkestis back to earth, is attributed to Exekias as an early work. The second had been at one time much restored; it is of a later type, with flanged handles. It shows a Pyrrhic dance scene on the obverse, and a battle on the reverse. It is considered to be in the manner of the Antimenes Painter, but not necessarily by his hand, and is dated about 530 B.C., ten years at least later than the first one.

INSCRIPTIONS

Greek Epigraphy, 1939–1940.—M. N. TOD makes a survey of the work done in the field of Greek epigraphy in 1939–1940 in *JHS.* lxii, 1942, pp. 51–83, according to the plan of his earlier work, i.e. by sections of the Greek world, Attica, the Peloponnese, central and northern Greece, Macedonia, Thrace and Scythia, the islands of the Aegean, western Europe, Asia Minor, Syria, Palestine, and Africa. Prior to his detailed analysis of progress in each of the areas mentioned, Tod summarizes the most important general publications in the field. Of the *Inscriptiones Graecae* one new instalment, containing the supplements to vol. xii, edited by F. Hiller von Gaertringen, has appeared; of J. J. E. Hondius' *Supplementum Epigraphicum Graecum*, the first part of vol. ix has been published and of A. S. Arvanitopoulos' work, Ἐπιγραφική (Athens, 1937–1939) two instalments have been issued.

Inscriptions in Fitzwilliam Museum.—F. M. HEICHELHEIM publishes in *JHS.* lxii, 1942, pp. 14–20, a complete list, and, where it seems advisable, a full description of sixty-four inscriptions in stone, bronze, and wood, now in the collection of Greek inscriptions in the Fitzwilliam Museum, Cambridge. Twenty-four of these are unpublished. The collection includes material from Athens, Peloponnesus, the islands, Crete, Pontus, Phanagoria, Troas, Ionia, Caria, Phrygia, Egypt, Nubia, Rome, Britain, and three of uncertain provenance.

Corinthiaca.—Under this title, STERLING DOW, in *Harv. St.* liii, 1942, pp. 89–119 (pl.) reexamines a number of the previously published inscriptions from Corinth. (This is the second article by Dow under this title, the first having appeared in this JOURNAL xlvi, 1942, pp. 69–72). Calling attention to the lack of material extant, either in literature or in epigraphy, regarding the history of Corinth in the Greek period, he nevertheless points out that "more can be learned than has been learned from the inscriptions already published." First, he takes up a list of names under rubrics (*Cor.* viii, 1, 11) for which he gives a revised text, with a description of the stone, notes on the text, and a very full commentary, proving that the rubrics stand for the four main tribes of Corinthians, which were later divided each into two divisions, making eight tribes in all. He believes this inscription to be a list of men fallen in battle, and dates it in the fourth century, probably in the latter half. Taking up next "Various Inscriptions of the Greek Period" he discusses, and in some cases gives new readings or interpretations, of *Cor.* viii, 1, nos. 22, 221, 235, 36, 225, and 21. The Decrees are next studied, and he employs the same process with *Cor.* viii, 1, nos. 2–9; he follows Woodward in rejecting no. 7 as a decree, and he also excludes no. 9 which, in any case, is Roman in date, while nos. 4 and 6 are probably not decrees of Corinth at all, but of other places, honoring Corinthians. The principal thing that we can learn from these decrees is that Corinth had an ekklesia, which was at its strongest after 243 B.C. Dow concludes his article by discussing the paucity of inscriptional material of the era before 146 B.C., and decides that the reason lay in the temper of the people, who were not interested in public documents; he also suspects that the percentage of illiteracy may have been high. Furthermore, Corinth appears to have been governed during most of the Greek period by a mercantile oligarchy, rather than a democracy.

Olympichus of Alinda.—E. W. WALBANK in *JHS.* lxii, 1942, pp. 8–13, discusses the evidence for the participation of Olympichus of Alinda as a general in the Carian expedition of Antigonus Doson, and concludes that in 202 Olympichus was still an independent dynast, known to be closely connected with Philip v, but not openly and directly under his authority. The change in status

must have come, not with Doson's Carian expedition, but with Philip's, dated in 201 B.C. on the basis of an inscription (*BCH.* lviii, 1934, pp. 291–298), found at Demirdjidéré in 1934 and published by A. Laumonier. The obscure expedition of Doson in 227 may have resulted in the opening up of relations of a loose kind in the form of guest-friendship with the then ruler of Alinda. In the course of time Philip evidently revived his relations with Alinda and obtained the collaboration of Olympichus in a mutually profitable scheme of expansion. Following upon Philip's personal intervention in Caria in 201, Olympichus passed directly within his sphere of control, and took the status of στρατηγός.

ITALY

GENERAL AND MISCELLANEOUS

Sardinia.—In *Geographical Rev.* xxxiii, 1943, pp. 630–654 (18 figs.), DORO LEVI writes a comprehensive study of the geography, history, and archaeology of this too-little known island, from earliest times to the present day. Geographically, Sardinia lies on a meridional line from the Gulf of Genoa to Africa, a remnant of an ancient submerged land mass. Its mountains are rich in lead, zinc, and copper. The country has but little steady water supply, and marshes and lagoons have brought much malaria to the lowlands, causing a strong difference in temperament between the inhabitants of the interior and those of the coast. The earliest evidence of human life on the island cannot be brought earlier than the Late Neolithic age, and it is probable that the first settlers came from the nearest coast of Africa. They lived in natural caves near the sea—numerous remains have been found near the Gulf of Cagliari. With the usual stone objects are, however, often associated copper needles, showing a contact with the Eneolithic phase. Their tombs are artificial caves cut in the rock, and consist of one or more rooms with access from a corridor—the best known is the necropolis of Anghelu Ruju. Levi himself in 1936 discovered a new group of tombs on this site, yielding copper weapons and implements, indicating the beginning of the Bronze Age, and relationships with the West, particularly Spain, and other objects showing a strong resemblance to the finds from Cycladic sites, suggesting a very definite influence from that region. Undeniable relations with Malta are also revealed.

The most brilliant period of Sardinian prehistory came in the Bronze Age, and is known as "nuragic," from the local name of the most characteristic buildings, the *nuraghi*. These are conical towers with a narrow entrance, from which a corridor leads to a large central space with a high beehive vault. Often the arrangement is much more complicated, and consists of two or three towers with more than one storey each, connected by corridors. They served as fortified castles, and as places of refuge for local tribes. This period is also marked by a great development of the metal industries—furnaces and molds for casting have been discovered, as well as rich finds of weapons and implements, including sword blades of a length of almost 2 m., the longest known from the ancient world. Evidence of relations with the outside world exist in the form of specimens engraved with letters of the Cretan alphabet. Small bronze statuettes have been found, showing the chiefs of tribes, warriors, etc., as well as images of gods. Levi holds that the *nuraghi* are derived from primitive house construction, and believes that this is confirmed by the architecture of the Bronze Age tombs, citing the so-called "Tombs of the Giants," which are derived from dolmens. Menhirs are also found in Sardinia. The most characteristic and imposing sanctuaries are the "well temples"—but smaller examples called "sacred fountains" exist in large numbers, water, perhaps owing to its scarcity, being an object of worship. The *nuraghi* "bear witness to an extreme territorial division—pointing to an organization similar to that of the feudal castles of the Middle Ages."

Early in its history, Phoenician settlements appear in Sardinia, believed by some authorities to be as early as the tenth century B.C. The most important were on the Gulf of Cagliari, at Caralis (the modern Cagliari) and Nora, on its western promontory. The latter may have even been founded before Carthage. Further investigation of this period is necessary to establish a chronology. We do know, however, that Carthage established her supremacy in the seventh century B.C., and founded a number of new towns and naval bases, driving out Greek influence in 537 B.C. Attempts to conquer the interior were partially successful, but the allegiance of islanders was finally secured through peaceful penetration. During this period the island was extremely prosperous.

The long Roman occupation of Sardinia took place with the conquest of the island about 241 B.C., but it was not without frequent rebellion of the inhabitants down to the beginning of the

Empire. As early as the time of Cicero, Sardinia was considered one of the main granaries of Rome. The Punic language was preserved as late as the Antonine period, and the Carthaginian system of land tenure was maintained. Under the Empire, a large building and public works program was initiated, and roads were built, some of which are still in use. So thorough was the Roman impress on the people that the Sardinians to this day speak a language closer to Latin than any other Italian dialect.

With the fall of the Empire, Sardinia was conquered by the Vandals under Genseric, and this occupation was of long duration. Christianity was adopted, with a tendency towards rigid orthodoxy. Under Justinian, the island was conquered by Byzantium, but during this period, the real power lay in the hands of the Pope. The danger of an Arab conquest in the Middle Ages was averted by the Republics of Pisa and Genoa, who struggled with each other for the domination of the island. During the twelfth and thirteenth centuries, Pisa held sway over the south and east, Genoa over the northwest. To Pisa in the main is due the fine Romanesque architecture found in Sardinia, which, next to the *nuraghi*, is the island's characteristic construction. Jealous of the two republics, Pope Boniface VIII, in 1297, invested King James II of Aragon as King of Sardinia, in exchange for his renunciation of Sicily. Thus begins the long period of Spanish conquest and occupation; the island was not completely subdued till 1478, and the occupation, which was the nadir of the island's history, lasted till 1718, when the Treaty of London ceded it to the House of Savoy, under King Victor Amadeus II, who assumed the style of King of Sardinia. Cagliari became the capital of the Piedmontese kingdom during the Napoleonic era, and until the Peace of Vienna. The article concludes with sections of the part played by the island in the Italian Risorgimento, and its condition in modern times.

Temple Above Pompey's Theater.—In *CJ.* xxxix, pp. 360–365, DOROTHY KENT HILL has a paper on this subject. Pompey built the first permanent stone theater in Rome in 55 B.C., crowning it with a temple: the steps leading to the temple were the seats of the theater. Similar examples already existed in other places—the earliest, of the third century B.C., was at Cagliari, and was a sanctuary, with steps in a semicircle for the observance of religious ceremonies. There was another such group at Gabii, of which the remains of the temple still exist; the date of its construction was about 200 B.C., but the stage and its attendant building were later. At Praeneste Sulla, in rebuilding the city, laid out a mass of buildings for the cult of Fortuna—the highest point consisted of a semicircular flight of steps, with a colonnade and a small round temple at the top. Most of this is now embodied in the Barberini Palace, but a semicircular flight of twelve steps is still preserved, which is clearly of Sullan construction. The plan of the group at Praeneste is very similar to that used by Pompey—the plan of his theater is known to us from excavations carried on as early as the fifteenth century, and resumed in the nineteenth, and from the marble plan of the city in the Antiquarium in Rome. Pompey's temple foundation is, however, rectangular, with a round apse in the back, and in its final stage there was an elaborate stage and stage building. Plutarch states that Pompey adopted the plan of the theater at Mitylene, but that may have also resembled Praeneste. The selection of the flat land of the Campus Martius for this construction was unfortunate, as it gave an impression of ugliness to the ensemble, and for this reason it was never copied. There is some doubt as to whom the temple was dedicated; Tertullian says Venus, Aulus Gellius, Victoria. The worship of Venus Victrix was instituted, according to Servius (*Aen.* I, 720), by Julius Caesar after Pompey's death. There was opposition in Rome to a permanent theater, and in fact the Senate forbade such construction during the second century B.C. Various accounts are given in ancient authors of the ceremonies attending the dedication of the temple and theater. The edifice should be considered as a temple, the steps of which were the seats of a theater; but from that time on, other theaters erected in Rome were of a permanent nature.

Mediterranean Antiquities.—The *London Times* for January 13, 1944, prints an article by JAMES G. MANN, Keeper of the Wallace Collection, regarding the condition of affairs in North Africa, Sicily, and that part of Italy occupied by the United Nations. Most of the sites on the coast of Libya were "scorched but not altogether consumed," while Leptis Magna and other sites and museums in Tripolitania were saved, owing to the presence of "a British officer who was also an eminent archaeologist." In Tunis it is understood that the great mosque at Kairouan is intact, and that the French have taken measures to preserve the local sites of importance. In Sicily, the only

serious losses occurred at Randazzo, where, unfortunately, the Italians had deposited works of art for safety, and which was completely destroyed in the fighting, while the cathedrals at Palermo and Catania were damaged. In Italy, the twelfth-century cathedral at Benevento was destroyed; Capua, with its Roman bridge, also suffered, while the Monastery at Monte Cassino had been selected as a safe deposit for the bronzes from Herculaneum, and for many of the pictures of the Naples Museum. In Naples itself, the church of Santa Chiara was destroyed by a fire that lasted for two days; one tower of the Castel Nuovo is lost, but the rest of the building is intact; while the State Archives of Naples, and the contents of the Filangeri Museum were wantonly destroyed by the German army, before evacuating the city.

Italian Treasures Destroyed. — The *London Times* for February 2, 1944, prints a communication from Sir J. Grigg, Secretary of State for War, in reply to a request from Mr. Keeling, M.P. for Twickenham, regarding work done by the Allied forces to preserve and protect works of art and objects of archaeological importance in North Africa, Sicily, and Southern Italy, and the machinery set up to give the officers entrusted with this work the necessary authority with the military commanders. He also signalized in most condemnatory terms the vandalism of the enemy in the destruction of the Library of the University of Naples, and the contents of the Villa Montezone near Nola, where besides the South Italian archives, many works of art were wantonly and barbarously destroyed by a people who call themselves "cultured." An editorial in the same issue of the *Times* comments on this communication, contrasting the stupid barbarism of the Nazis with the enlightened intelligence shown by the Allied authorities, under the "admirable instructions" of General Eisenhower.

EARLY CHRISTIAN

Armenian Sculpture. — In *The Art Bulletin* xxv, 1943, pp. 346–357, Armenag Sakisian discusses the sculpture on the Church of Sourp Khatch on the Island of Akhthamer, which was built in the first quarter of the tenth century. A large frieze which runs around the outer wall of the church a few meters above the ground bears representations of Biblical themes, alternating with real and fantastic animal figures. Above this are a series of animal heads in relief, a frieze of vines, and, under the eaves, processions of animals. Figures of Christ, the donor King Kakig, and the evangelists also appear on the outside of the building. "The sculpture of Akhthamer is remarkable for its relief and its realism as well as for its monumental character. . . . The church is definitely Armenian in character . . . part of a local nationalist movement which had its roots deep in the soil."

MEDIAEVAL

All Hallows, Barking. — In *AJ.* xxiii, 1943, pp. 14–18, T. D. Kendrick and C. A. Raleigh Radford describe the fragments of an imposing Saxon cross brought to light by an enemy bomb. The date is 1030–1050. Considerably earlier are the remains of an early Saxon wall and arch, also uncovered by the same bomb. These are the most important remains of Saxon building yet found in London.

Damage to South Italian Churches. — *The Tablet* (London) of February 19, 1944, p. 89, has an article which deals for the most part with this subject, though not excluding other monuments. No important monument in Calabria is reported to have been damaged, although much destruction took place at Reggio di Calabria, where the local Archbishop lost his life; but there and in Cosenza the principal losses had already taken place, in the earthquake of 1908. In Lucania, the most serious loss is that of the provincial museum at Potenza, which contained the finds from the Greek temple of Metaponto. In Apulia, some damage was done at Taranto, and at Bari the chapter house of the Cathedral was hit, while minor damage was done to the famous Church of S. Niccolò, and to several other churches. The towns of Barletta, Trani, Altamura and Canosa, and the famous Castel del Monte, are all intact. The greatest loss yet recorded is the Cathedral at Benevento, completely destroyed (the Roman triumphal arch there was apparently uninjured), but the Cathedrals at Avellino and Salerno are intact — in the latter are interred the bones of St. Matthew, and the fabric dates from the time of Robert Guiscard. Six churches in Naples are listed as destroyed, of which the most important is that of Sta. Chiara, in which the Angevin Kings were buried. Nineteen others are described as seriously damaged, including the Incoronata, S. Domenico Maggiore, S. Giovanni a Carbonara, S. Gesù Nuovo, and S. Paolo Maggiore. Of secular buildings and their contents, the most serious loss is that of the South Italian archives, "wantonly de-

stroyed by men who had full knowledge of what they were doing," which had been deposited near Nola, and were burned (under explicit orders) by the Germans. The Castel Sant'Elmo at Naples was badly hurt by German demolition work. At Capua the whole town suffered, and the Cathedral was destroyed, as well as the eleventh-century church of S. Angelo in Formis near that city. Finally a list of the houses damaged at Pompeii is given—Herculaneum, however, received no hurt at all.—In *ibid.* for February 26, 1944, there is a supplementary list of churches in Sicily that were injured. The most serious loss was the severe damage done to the Cathedral at Messina, already much hurt by the earthquake of 1908. Other churches destroyed are those of the Annunciation at Palermo, and S. Gaetano at Calabria, while listed as badly damaged are S. Francesco and Sta. Maria della Catena at Palermo and S. Niccolò at Catania. Most of the churches in Palermo needed repairs; "much of this work was undertaken at once."

Cartmel Priory.—In *AJ.* xxiii, 1943, pp. 26–30, J. B. Ward Perkins describes the armor and equipment on the Harrington effigy (A.D. 1310–1325). The sword is a derivative Viking type, similar to others found in Northern England and Scotland. It is important for the evidence it affords of the late survival of Viking types.

Abbey of Pontigny.—We have received a clipping from *The Tablet* (London) of January 29, 1944, stating that this fine ancient Cistercian Abbey, founded by St. Stephen Harding, was devastated several weeks ago, when members of the resistance movement blew up some adjacent military objective. From this abbey came three Archbishops of Canterbury—St. Thomas, Stephen Langton, and St. Edmund Rich, the latter of whom is buried there.

Florentine Romanesque.—Using the Church of San Miniato al Monte as the principal source of information, Walter Horn discusses the Romanesque basilicas in Florence, *The Art Bulletin* xxv, 1943, pp. 112–131. Three periods of construction, marked by quite obvious changes in masonry technique and material, are apparent in San Miniato. "The church was built in three successive stages: I) The east wall of the crypt; II) the lower story of the façade, the aisle walls, the choir in its entire height to the line of junction which separates the clerestories of nave and choir; III) the clerestory of the nave, the inner arcade of the nave, and the second story of the façade." The problem of dating San Miniato has always been confused by the obvious differences in style of the marble decoration on the upper and lower sections of the façade. Horn shows, however, that the decorative facing was applied during the course of construction and consequently that the lower section of the façade belongs to the second period, while the upper decoration is of the third period. It is probable that the new church was built around an old one, which was kept in use until the new structure was ready for service. The arcades and clerestory of the new nave could not be finished until the old church was removed. This new building was started about 1070 and was finished probably in the second quarter of the twelfth century, with the exception of the pediment which certainly dates from the beginning of the thirteenth century. The author compares the masonry technique and certain decorative details found in other Florentine Romanesque basilicas, some of which can be accurately dated, and thus establishes a relative chronology. In conclusion he points out the strikingly individual character of Florentine Romanesque.

RENAISSANCE

Giotto.—In *The Art Bulletin* xxv, 1943, pp. 97–111, Frank Jewett Mather, Jr., discusses the historical evidence for Giotto's authorship of the St. Francis Series at Assisi. Critics who have based their arguments against such an attribution solely on style have either ignored historical facts or interpreted them to fit an agreeable conclusion. As Dr. Mather says, "in facing a problem in the history of art the first duty is to consider and organize all the documentary and historical evidence. . . . Intuitions based on style are merely accessory to historical research and have no weight against historical evidence to the contrary." On the basis of facts presented by the author, there can be no doubt that the St. Francis Series was the work of Giotto. Apparent stylistic discrepancies must be, and are subject to reasonable explanation.

Leonardo da Vinci and Scientific Drawing.—In *Am. Scientist* xxxi, 1943, pp. 311–328 (8 figs.), O. Benesch discusses the drawings of Leonardo, in which, as opposed to his plastic work, of which nothing has remained, and his paintings, of which too few were completed, "we get a totality of unsurpassed richness." Most of these drawings consist of illustrations in his scientific manuscripts. "The picture of the artist Leonardo will ever re-

main incomplete without the scientist." It was the workshops of the artists in the Renaissance that furthered the study of science and mathematics, and the painters became the pioneers of research in anatomy. In Leonardo the scientific spirit of the Quattrocento reaches its culmination, as he was an indefatigable observer, and graphically recorded his observations. More than 7000 pages of his manuscripts, illustrated with his own drawings, have survived. None of these were published during his lifetime, and many of his manuscripts seem devoid of any system—the writer cites as an example one in Windsor Castle, in which all manner of subjects are discussed and illustrated without apparent order. It is in the drawings that we must seek a solution of his mental processes. The bulk of the manuscripts are now in (1) the Ambrosian Library in Milan, (2) the Bibliothèque de l'Institut in Paris, or (3) Windsor Castle. Benesch concerns himself principally with the Windsor manuscripts, which deal with the biological and descriptive sciences. Leonardo depended almost entirely on his eyes to prove any statements he made, hence his drawings attained "a likeness to reality never before achieved." This is shown in his drawings of plants, flowers and trees, some of which are illustrated. In this connection, Leonardo made the important discovery that the age of trees can be computed from the number of the main shoots of the branches arranged in consecutive layers. He was also interested in the accurate representation of the movements of animals, and planned to write a treatise on the subject—some studies of horses in Windsor Castle were intended to illustrate it. A treatise on anatomy was also planned but never completed. His anatomical drawings are among his most beautiful, and were based on actual dissection, as an illustration shows. Although not absolutely free from error, they are a departure from previous work, and the anatomist McMurrich (*Leonardo the Anatomist*, p. 38) correctly states that if these drawings had been published in his lifetime, they would have caused a revolution in the scientific world. The movements of the body Leonardo considered allied to mechanics, on the elements of which he also planned to write. All this scientific research, however, was undertaken primarily with the idea of its usefulness for the artist. Leonardo was the first artist to sketch and draw in the open air, and therefore his landscapes are based directly on nature, and are not studio-pieces, based on memory or tradition. This arouses his interest in the earth as a living organism, hence in geology, one drawing of stratified rocks being illustrated. This idea is also shown in his maps, in which his adherence to the principle of the earth as living is clearly shown, so that the maps often bear a resemblance to his anatomical drawings. Many of his maps were drawn to illustrate his engineering conceptions. Among other things, he planned a tract on hydrodynamics, which caused him to study atmospheric conditions and cloud formations. A magnificent drawing at Windsor shows a storm breaking over a valley, and exhibits his acute observation of the phenomena of nature. Among the devices conceived by him, but not covered in this article by more than mention, are precursors of the airplane, the machine-gun, the bombshell, the tank, and the submarine. "With Leonardo begins the importance of drawing as diagram of technical and scientific conclusions and statements," so that scientific draughtsmen owe their professional existence to him. Finally, the writer calls attention to Leonardo's theories as to the deluge and the end of the world, and publishes one of his drawings on this subject. With Leonardo the artist and the scientist are always interdependent.

Andrea Pisano's Bronze Doors.—In *The Art Bulletin* XXV, 1943, pp. 132–153, ILSE FALK and JENŐ LÁNYI discuss the iconography of the scenes dealing with the story of St. John the Baptist on the bronze doors of the Florentine Baptistery, the work of Andrea Pisano. 17 of the 20 scenes on the doors occur in the mosaics in the dome of the Baptistery. 6 scenes from the story of the Saint were painted by Giotto in the frescoes of the Peruzzi Chapel of Sta. Croce in Florence; 5 of these are also found in the mosaics. Comparison of each scene as represented in the mosaics with those by Giotto and by Andrea shows that the sculptor was strongly influenced by Giotto. He adopted with little change the painter's version wherever there was a prototype. Otherwise, he followed the mosaic version, but he interpreted, simplified and enlivened it, as his teacher Giotto might have done.

The Villa Giulia.—Central Italian architecture of the mid-sixteenth century—in particular, its most outstanding example, the Villa Giulia—is discussed by JOHN COOLIDGE in *The Art Bulletin* XXV, 1943, pp. 177–225. Julius III, Pope from 1550–1555, was a patron of the arts. "By patronizing artists and giving them the opportunity to work out their separate styles, Julius III ushered in a new age in the long history of Roman

buildings. . . . The Villa Giulia is important historically because it typifies the Julian revival. It is even more important because of its particular status within that revival. It epitomizes just that one aspect of the movement which was to be significant in the long run – its experimental character. Of all the Pope's buildings, the Villa was *par excellence* the proving ground of young men and new ideas. . . . For this reason the understanding of the building is a necessary key to the knowledge of late Renaissance architecture in central Italy."

After describing the building as it exists today, and breaking up the complex into its component parts, Coolidge turns to the historical evidence. The building was constructed almost entirely under Julius III, consequently in the space of a few years. The building accounts are completely preserved. The author then proceeds to attribute to the architects who are known to have worked on the building their individual contributions. The first plans were drawn up by Vasari. Vignola was employed first as the foreman in charge of building operations and as an hydraulic engineer, but owing to his ability and aggressiveness, he began to displace Vasari. The latter called in another protegé, Ammannati, and worked with him on the fountain, while Vignola completed the main Casino, where his characteristic style is chiefly evident in the elevations. Eventually Ammannati was left alone to finish the work, in particular the construction of a loggia and the walls which connected the Casino and the Fountain and enclosed the main court.

The plan of the Villa Giulia complex is based on the repetition of semicircles. The dynamic quality of this form was further strengthened by the confining walls, which forced one to proceed from one semicircle to the next. It may be that the main court was intended to serve as an open-air theater with temporary seats placed in the semicircle, and the elaborate walls of the courtyard incorporated in the stage set. Whether the Villa Giulia was ever used as a theater or not, there seems to be no doubt that it served as the archetype of the so-called Spectacle Palaces, and that it occupies "a key position in the development of Italian secular architecture of the Late Renaissance."

Renaissance Sculpture. – Georg Swarzenski presents the first of at least two articles on this subject in *GBA*. ser. vi, xxiv, 1943, pp. 149–156 (4 figs.). He comments upon the disproportion of sculpture to paintings in the National Gallery in Washington, there being only 128, as compared to 846 paintings. Furthermore, the sculptures are confined to Italian Renaissance, and later French works, especially of the eighteenth century. There are, however, 94 examples of Italian Renaissance, and of its early period the representation is the finest in America, and one of the 5 finest in the world. The nucleus is Quattrocento Florence, and is composed of famous works attributed to the great masters. 4 examples are illustrated – Madonnas by Agostino di Duccio and Amadeo, the portrait bust of Astorgio Manfredi by Opus Nini, and a bronze bust of Jacopo Sansovino by Pietro Aretino, the last 2 being in the Widener Collection. Mention is also made of Donatello's Mastelli David.

AMERICA

Peru. – There has recently been sent to the Editors of this Journal from the University of Cuzco, Peru, a periodical entitled *Revista del Instituto Arqueologico*, bearing the serial number vi, 1942. A brief Introduction announces the establishment at the University of a Department of Archaeology, to prepare Peruvian students for the study of their antiquities. This section began its work in July, 1942. The announcement is written by the Director of the Department, John H. Rowe, who also on pp. 66–75 (4 figs.) writes on *Historic Sites in Region of Pucara, Puno*, describing the results of excavations conducted by him in collaboration with Alfred Kidder, 2nd, and giving a select bibliography of the region. Luis A. Pardo contributes two important articles; (1) pp. 1–30 (60 figs.) on the *Petroglyphs of the Department of Cuzco*, listing and illustrating 59 examples, and comparing them with examples in other localities in different parts of the world, and (2) pp. 43–51 (33 figs.) cataloguing *Stone Objects in the Archaeological Museum of the University of Cuzco*, which include mortars and pestles, vases of different kinds, and other utensils. C. Bües (pp. 31–38) contributes a short article on the *Study of Pre-Columbian Petropictography in Southern Peru*, to be read in connection with Pardo's first paper. Other archaeological papers in this periodical include one by B. G. on *Vestiges of the Incaic Period in Ancahuasi*, and an important article by Sofia Arredondo on *The Ruins of Markansaya*, which are Pre-Inca. This paper is divided into two divisions; (1) a discussion of the people responsible for the site, and (2) a description of the archaeological remains. The rest of the periodical

is devoted to historical papers. All are in Spanish. It is with great satisfaction that we greet this fine example of scientific archaeological work, and we eagerly await further numbers of this review.

Excavations in Eastern Mexico.—Although the title, *An Introduction to the Ceramics of Tres Zapotes, Vera Cruz, Mexico*, is a modest and specialized one, this *Bulletin 139 of the Bureau of American Ethnology, Smithsonian Institution*, Washington, 1943, by C. W. Weiant is the fullest report (i–xiv, 1–144 pp., 78 plates, 54 text figs.) that has been published to date on these important researches of the joint expedition of the Smithsonian Institution and the National Geographic Society in 1939. The excavations are briefly described, with drawings and plans, but naturally the major part of the report, and all but the last thirteen plates, concern the pottery. Masonry and architecture are entirely absent. The deposits indicate four principal horizons, termed Lower, Middle A, Middle B, and Upper. Tres Zapotes is not so typical an "Olmec" site as La Venta, excavated later, and the excavations threw little light on the question "who were the Olmec?" This problem, together with those of the relationship of the Tres Zapotes culture to the Q Complex, the Archaic or Middle Cultures, the early and late Maya, Teotihuacan, Totonacapan, the Zapotec, Huaxtec and Aztec are briefly considered in the last and most important part of the report. The answers are seldom conclusive.

The relationship with the Maya "Old Empire" was intimate, but little light is thrown on the question of Maya origins. Tres Zapotes was apparently, in its earliest phase, an early Middle Culture site, and may have been fundamental rather than peripheral to the Maya area. It is considered to have survived into "late prehistoric times," though entire absence of metal "argues against late occupation." Teotihuacan influence was slight. The resemblance with Totonac is obvious but not strong. On the other hand, there was a close cultural contact with the Zapotec through a long period, closer relations than with the later Mixteca-Puebla culture, and no direct Aztec influence under this category. The cultural contact with the Huaxtec was late. Tres Zapotes was contemporary with the Middle Cultures (Archaic) of the Valley of Mexico, but there was little contact between them; the influence of the site was rather to the South and the East. About two-thirds of the traits of the "Q Complex" are found at Tres Zapotes, but its relationship to this hypothetical entity is undetermined.

The report is extremely well illustrated, pottery figurines comprising the majority of the plates. A large bibliography and full index add greatly to its value.

Art of Northwest Coast.—In *GBA.* ser. vi, xxiv, 1943, pp. 175–182 (6 figs.), Claude Levi-Strauss takes up the study of the art of the Indians of the Northwest Coast, extending from Alaska to British Columbia, as represented by the collections at the American Museum of Natural History in New York. Its known development was not longer than a century and a half, and during that period 10 different forms of art flourished, the best, perhaps, being the Chilkat textiles and the Tlingit sculpture and dance headdresses. The Haida sculptors, too, had a "brutal and powerful" technique, while the Kwakiutl showed "sumptuous fancies of forms and colors." Attempts have been made to show the influence of China in the art of these peoples, or to connect them with the Polynesians, but in neither case with any success, for anthropologically the natives are of pure American Indian stock. In order properly to interpret these objects, it is necessary to rely upon local folk-lore, and Kwakiutl and Tlingit legends are quoted as important in any attempt to explain their real function.

Mexican Colonial Painting.—Manuel Toussaint, in *GBA.* ser. vi, xxiv, 1943, pp. 167–174 (6 figs.), calls attention to the remarkable collection of Mexican Colonial paintings in the Municipal Art Gallery in Davenport, Ia., the richest in the United States, there being no less than 57 included, of which 8 are of prime importance, 10 others being only less so. Both of the two most valuable portray the Adoration of the Magi—the larger of the two is attributed by the writer to Sebastian de Arteaga, the smaller is signed by Baltasar de Echave y Rioja, with the date, 1659. The influence of Rubens on Arteaga is apparent. A Descent from the Cross, attributed in the local catalogue to Arteaga, is perhaps by Carreño. Paintings of St. Peter and St. Paul are studio pieces of Echave Orio, on which pupils worked with the master. Several other paintings of later date are mentioned without being illustrated. It is hoped that a more thorough study of this collection may be made at some later date.

Popayán, Colombia.—Henri Lehmann describes, in *GBA.* ser. vi, xxiv, 1943, pp. 41–54 (18 figs.) the Spanish colonial churches in this very

interesting place. Only one church, that of the Ermita de Jesus, of the end of the seventeenth or early eighteenth century, survived a great earthquake in 1736; the others now existing belong in the second half of the eighteenth century. All are baroque, but sober in exterior. They are, however, rich in wood carvings of a very exuberant type. The writer signalizes the pulpits in the churches of San Francisco and San Augustin, the altars of the Señor de la Coronación and Las Monjas del Carmen, and particularly those of Las Monjas de la Encarnación; a Christ Child in San Francisco, and also a Christ on the Cross with Saints, in the same church. In the field of paintings the churches are extremely rich: these paintings reach their apogee by the end of the eighteenth century. A painting of Christ on the Cross in the church of San Francisco shows the strong influence of El Greco. A certain José Maria Burbano executed the Stations of the Cross for this same church, in 1798 and 1799, and his teacher, Bernardo Rodrigues, a Last Supper, also in San Francisco, in 1780. A number of quite remarkable unsigned paintings are listed and illustrated, which reveal acquaintance with, and influence of, a number of European schools.

Architectural Work of Thomas Jefferson.—In *GBA.* ser. vi, xxiv, 1943, pp. 89–106 (21 figs.), THOMAS T. WATERMAN attempts to bring to light the early activity of Jefferson as an architect. Unfortunately in 1770 his birthplace, Shadwell in Albemarle County, Va., was burned to the ground with all his papers and records up to that time, so such an attempt must necessarily be based on circumstantial evidence. Three houses are attributed to him in this article: the Randolph-Semple house in Williamsburg, placed at about 1765; "Brandon," in Prince George County, Va., the earliest part of which can be definitely dated in the same year; and "Battersea," in Dinwiddie County, Va., which was probably built between 1765 and 1770. For Jefferson's own house at Monticello, a number of preliminary studies were made by him, beginning in 1769, while the final plan dates in 1771. All of these plans are in existence. In addition, the writer publishes two plans made by Jefferson (perhaps in 1773) for alterations to the Governor's Palace at Williamsburg, now in the Massachusetts Historical Society. His work shows the influence of Robert Morris's *Select Architecture* (London, 1757) and, later, of Palladio; but he improves on their designs in many ways.

FAR EAST

Importation of Chinese Silk in the Roman Orient.—In *The Art Bulletin* XXV, 1943, pp. 358–362, OTTO MAENCHEN-HELFEN presents further arguments to prove the Chinese origin of some fragments of silk found at Palmyra. The pieces were first identified as Chinese by Pfister, but this attribution has been questioned recently by Dr. Ackerman, who thinks that at least one of the pieces is East Parthian.

Burma.—*Smithsonian Inst. War Background Studies* no. 17, 1943 (iv, 21 pp., 16 pls., map) is entitled *Burma, Gateway to China.* The writer is H. G. DEIGNAN of the U. S. National Museum. Of interest to readers of this JOURNAL will be the sections dealing with the geography, peoples, and early history of the country. In the north, the Himalayan range stretches across the country, forming a natural boundary between Burma, Assam, Tibet and China (Yunnan Province). In the west, other mountains, forming part of the so-called Burma-Java Arc, also shut off the country from Assam. In the east, there is a continuation of the Indo-Malayan mountain system. Culturally, strong relationships exist with Siam and Indo-China, but the culture is alien to China and India. This is doubtless due to these mountain barriers. Owing to the climatic conditions, Burma leaves much to be desired from the point of view of health, malaria and tuberculosis being the principal scourges. No less than 126 native languages and dialects are spoken, with Burman (which is allied linguistically to Tibetan) predominating—the alphabet is derived from Pali. The Burmans are of Mongolian stock, coming originally from Southeastern Tibet and Southwest China. Other racial types are the Shans, who are of the same stock as the Siamese and the Tai of South China, and the Karens, who have responded most rapidly to European influence, and particularly to Christianity. These three are the main racial stocks, but there are numerous other tribal groups. The social life of the people resembles that of Siam—particularly significant is the emancipated position of women.

Of the aboriginal inhabitants of Burma nothing is known—in fact, the most ancient inscriptions in the Burman language do not antedate 1100 A.D., and Burman history begins with Anawrahta (a contemporary of William the Conqueror) who introduced Buddhism, and established a dynasty, with his capital at Pagan, about 250 miles north

of Rangoon. Many of the imposing and beautiful temples and pagodas of his dynasty still exist at that site. This dynasty was overthrown in 1287 by the Mongols, and an era of anarchy and succeeding conquests from without set in, which lasted till the reign of Minkyinyo (1486–1531), who established the supremacy of the kingdom of Toungoo. This was continued by his son Tabinshweti (1531–1550) who expanded his father's conquests, while bis son and successor, Bayinnaung, a contemporary of Queen Elizabeth, conquered all of modern Burma and part of Siam. After his death in 1581, nearly two centuries of chaos ensued, until, in 1752, a strong ruler, Alaungpaya, arose, and formed the dynasty that ruled over Burma till the final British conquest in 1885. The last part of the article is devoted to the three Anglo-Burmese Wars, and short sections on the British administration, the relations between Burma and Japan before the war, the Burma Road (which in places follows the ancient Tribute Road, already old in the days of Marco Polo), the battles at the beginning of the present war in the Orient, and the so-called "Co-Prosperity" inaugurated by the Japanese. The article is followed by a brief bibliography.

Buddhist Bronze from South Russia.—Alfred Salmony publishes, in *GBA.* ser. vi, xxiv, 1943, pp. 123–124 (fig.) a bronze statuette in the Archaeological Museum in Odessa, said to have been excavated in the neighborhood. It is obviously of Chinese origin and Buddhist significance. The technique shows that it belongs in the T'ang period (618–906 A.D.) and probably represents the Bodhisatva Balakitisvasa. It was undoubtedly brought to South Russia by the nomads of the steppes between that region and China. The nomads during the T'ang period were Turks, many of whom had embraced Buddhism. Other examples of Chinese sculpture in South Russia are known, and a plea is made for thorough research in the field of Buddhist art in the Russian provincial museums.

The Tribute Horse.—Alan Priest publishes, in *BMMA.* n.s. ii, 1943, pp. 85–92 (6 figs. and cover design) a very important Chinese painting, recently acquired by the Metropolitan Museum. It is of the early Sung Dynasty, and bears striking resemblances to the work ascribed to Kuo Hsi (1020–1090). The subject is a procession with a tribute horse, passing through a mountain landscape. While the technique is Sung, the subject, and the accouterments of men and horses, resemble those in T'ang paintings. Consequently, in this painting we have a T'ang subject painted by a Sung artist, who, in his treatment of the subjects, and in the colors of his palette, uses methods almost, if not quite, unique. There is no signature, and no evidence of ultimate provenance, except that it was acquired in Peking some years ago by a private collector. It is badly damaged, but has been scarcely if at all retouched. It is hoped later to publish this painting in a separate book, with abundant details.

Kuo Ch'in Wang Textiles.—This important find, from the tomb of the imperial Prince Kuo Ch'in Wang, seventeenth son of the Emperor K'ang Hsi, who died in 1738 at the age of forty-two, and whose tomb was broken open by bandits in 1934, is the subject of two recent articles—by Lindsay Hughes in *GBA.* ser. vi, xxiv, 1943, pp. 129–148 (26 figs.) and by Alan Priest in *BMMA.* n.s. ii, 1943, pp. 33–46 (22 figs.). Fortunately, most of the contents of the tomb, as far as the textiles were concerned, was purchased for the Kansas City Museum by its curator Laurence Sickman, who was at Peiping at the time the tomb was looted. One robe, known to come from this tomb, and one made up at a later date from material from this tomb, are in the Minneapolis Institute of Fine Arts, and two robes and a number of large fragments are in the Metropolitan Museum. The Museum of Fine Arts in Boston has one fragment from a bolt of material in Kansas City, and other examples are in Stockholm. In all, 15 robes are known to have come from this tomb, of which Kansas City has 9 and the fragment of a tenth, together with bolts of brocades and damasks and other items, making a total of about 70 pieces. The origin of these textiles was attested by the existence in the tomb of the soul tablets of the prince. The collection was exhibited in Kansas City in the winter of 1943, and a further exhibition of Chinese textiles of great importance was held at Minneapolis in the spring of that year. Through this find it is now possible more accurately to date the ceremonial robes of China than hitherto, as these examples must antedate 1738, and some might conceivably be of the preceding K'ang Hsi period. Miss Hughes in her article gives a very complete and sympathetic description of the various robes, accompanied with excellent illustrations, while Priest's article attempts the problem of the chronology, dealing not only with this specific find, but with the entire subject. He suggests that at least 2, if not 3, robes

from this find were made for K'ang Hsi himself, and others for Yung Chêng.

U.S.S.R.

Excavations at Khwarazm, 1940–1941. In 1940, during the fourth season of field explorations by the Khwarazmian Archaeological Expedition of the Institute for the History of Material Culture of the Academy of Sciences of the U.S.S.R., the chronological framework of the investigations was greatly expanded under the leadership of S. P. Tolstov.[1]

During the first three [2] years the work of the Expedition was limited mainly to the study of the early and the Aphrigidian periods, with only preliminary prospecting in the earlier and later periods. During 1940 [3] most of the work was devoted to the study of prehistoric Khwarazm and to mediaeval monuments. In addition, the following objectives were followed [4] in sequence:

(a) To fill in chronological gaps so as to determine the evolution of the Khwarazmian material culture.

(b) To continue the investigation of the ancient irrigation network of primitive Khwarazm in order to elucidate its historical position.

(c) To begin research beyond the boundaries of Upper Khwarazm, which had been adequately explored, into Lower Khwarazm beyond the Sultan-Wiz-dagh Mountains and in the area of the delta of the Amu Darya.

The earliest monument studied during 1940 was the Upper Palaeolithic (Kelti Minar Culture), Site No. 4, at Djanbas-Kal'a, discovered in the previous year. An area of 200 square m. was uncovered and additional materials were collected in the weathered section of the site, which covered about the same area. *A large communal dwelling* with clearly defined boundaries was partly excavated. The outline (22 by 16 m.) was roughly oval, formed by a polygon extending North-Northeast to South-Southwest. The dwelling was built entirely above the ground, upon a framework of poles and beams, and was covered with rushes. The posts (the pits filled with black ash and charcoal were preserved) formed three concentric circles, the outer along the periphery of the polygon, the inner in the shape of a square surrounding the central hearth, and the middle, in between. Clay was not used.

Upon the posts rested the radial beams of the roofs. This was covered with a close net of poles. The plan of the fallen roof of the dwelling could be traced from the thick charcoal streaks resting upon the main cultural stratum. Carbonized rushes from the roof were found throughout the building. In the center stood a large circular hearth, 1.20 m. in diameter, differing sharply in type from the ordinary hearth disposed in several rows along the periphery. The special characteristics of this central hearth were:

(a) Lack of household objects and kitchen remains; these were very abundant around the domestic hearths.

(b) Completely different character of the ashes; the domestic hearths contained largely black and gray ashes and charcoal, but the central hearth yielded compact pure white ashes suggesting that the fuel had been completely incinerated.

(c) Beneath the central hearth there was found a sandy stratum, 50 cm. thick, which by prolonged heating had become bright red. Similar strata of

[1] This report in Russian was received from VOKS in Kuibyshev at the Field Museum of Natural History during February, 1942. Under the supervision of Eugene Prostov the Congressional Library system of transliteration has been used, with minor modifications, for all proper nouns in Russian.

[2] The results of the excavations during 1937 were published by A. I. Terenozhkin, "Archaeological researches in Khwarazm," *Sovetskaia Arkheologia* vi, 1940; the season of 1938 by S. P. Tolstov, "Drevnekhorezmiiskie pamiatniki Kara-Kalpakii," *Vestnik Drevnei Istorii* 3, 1939; and the season of 1939 by S. P. Tolstov, "Drevnosti verkhnego Khorezma," *ibid.*, 1940, pp. 158–166. *See also* H. Field and E. Prostov, "Archaeological Investigations in Central Asia" v, Pt. 2, 1938, pp. 235–271; "Excavations at Khwarazm, 1937–1938," *Ars Islamica* vi, 1939, pp. 156–166; *American Anthropologist* xxxviii, 1936, p. 288; *AJSL* lii, 1936, p. 139; lvi, 1939, p. 322.

[3] The following organizations participated in the 1940 Expedition from July 31 to November 4, 1940: Historical Faculty of Moscow State University; Archaeological Section of the Institute of History, Language and Literature of the Uzbek branch of the Academy of Sciences of U.S.S.R.; Central Museum for Local Studies of the Kara-Kalpak A.S.S.R.; and the All-Union Academy of Architecture, which was represented by members of the Moscow Architectural Museum and by students of the Moscow Architectural Institute.

[4] The Expedition consisted of thirteen members, under the leadership of S. P. Tolstov, IIMK, assisted by IA. G. Guliamov of the Uzbekistan Branch of the Academy of Sciences of the U.S.S.R.

sand were found under the domestic hearth, but these were usually only 0.5–2.0 cm. thick.

On the basis of these discoveries it was concluded that this hearth was used for ritual purposes and also that a perpetual fire had long been kept burning.

Since the Kelti Minar Culture in general and at Djanbas-Kal'a Site No. 4 in particular could not be dated later than the third, or at the very latest, the beginning of the second millennium B.C., we must conclude that this may well be the earliest monument of fire worship in Central Asia and possibly in the Orient. This becomes particularly important in connection with the important rôle played by fire worship in Mazdaism, which was the predominating religion of pre-Muslim Central Asia and Iran. The perpetual fire of Djanbas-Kal'a Site No. 4 is a new argument in favor of the theory regarding the archaic character of the fundamental kernel of Mazdaism going back to the cults of a very primitive community and of such characteristic traits of this religion as fire worship, dualism and peculiar burial rites, all of which distinguish it from other ancient religions.

Along the periphery of the dwelling there were located several rows of domestic hearths or fire-platforms. In the excavated portion of the dwelling (144 square m.) were 46 fire-platforms. The total number of hearths, including the unexcavated and the weathered portions of the dwelling must have been at least 100. It was deduced that all these hearths were not contemporaneous and that their locations were frequently changed. It was concluded that the fire-platforms were originally arranged in two rows: one along the outer wall, the other 4–5 m. distant toward the center of the dwelling. There existed a degree of regularity in the distribution of the hearths within the sectors of the house formed by the radiating rows of posts. The central portion of each sector was usually free from fire-platforms. An entire area North-Northeast from the central hearth was also bare. To judge from the grouping of the fire-platforms and the finds, the entrance into the dwelling was in the middle of its short north side, leading through the above-mentioned zone free from hearths. That the entrance was not in the weathered southern portion of the dwelling was determined from the exceptional abundance and even distribution of finds in that section of the site, suggesting a continuous line of fire-platforms around which the finds were invariably associated.

The character of the plan of the dwelling permits us to make a few conclusions regarding the social organization of the Kelti Minar people. The great number of domestic fire-platforms and the instability and mobility of the hearths of the Kelti Minar Period can be contrasted with the stable, structurally designed hearths in the large dwellings of the Tripolje, Anan'ino and Biskupinskoe Cultures. The Kelti Minar dwellings, still more archaic than the long houses of the Iroquois, resemble the communal huts of the Mandans, the Bikaizis [?] and especially those of the Andaman Islanders, which are similar not only in the circular plan, but also in the presence of the perpetual communal fire and the distribution of the surrounding domestic fires.

The number of inhabitants of the Kelti Minarian dwellings must have been relatively large. On a similar basis the Mandan dwellings, averaging 11 m. in diameter hold 30–40 inhabitants, or 2.4–3.2 square m. per inhabitant. Andaman houses, 14 m. in diameter each hold up to 100 inhabitants or 1.5 m. per inhabitant. On a similar basis the dwelling at Djanbas-Kal'a Site No. 4, having a floor area of 280 square m., must have been inhabited by 100–125 individuals.

It is possible to attempt a reconstruction of the Kelti Minar dwelling both on the basis of the finds and by comparing it with structurally similar dwellings of primitive peoples. By comparison the height of the Djanbas-Kal'a dwelling should be determined as being approximately 8–10 m. The most common relation of height to diameter of round dwellings of such primitive peoples as the Andaman Islanders is 1:2, i.e. the slope of the roof is approximately 45 degrees. Such a construction is the most rational solution of the structural problem, giving:

(a) Optimum distribution of weight in two directions, vertical on the posts, and oblique along the slope of the roof.

(b) The slope of the roof is sufficiently great to facilitate the shedding of snow and rain, and not too steep to cause the slipping of the roofing. Poplars, one of the principal trees of this area of the Amu, were well adapted for the high posts of the building.

The finds at this site complete and expand the materials from the excavations during 1939 and enable us to draw several new historic-cultural conclusions.

Many fragments of pottery show a combination of stamped ornament with a red painted surface which supports Tolstov's contentions that in the

Kelti Minar culture the dominating influence, related to the Siberian Neolithic and to the "Steppe Bronze Age," was combined with early Anau elements. The oval plan of the Kelte Minar dwelling is also important because this type usually exists in contact zones between peoples inhabiting rectangular and round dwellings. For example, oval houses are found among the Arawak-Yamamadis in western Brazil and among the Carib-Bakairis living on the upper Xingu River in central Mato Grosso, Brazil. These tribes live north of the zone of rectangular house and south of the zone of the hemispherical dwellings of the Mato Grasso and Brazilian upland tribes.[5] In Africa the oval type is encountered among the Mangbattu (Mangbetu), who live on the frontier between the Sudan where the round plan predominates and the Congo Basin where rectangular structures are more common.

From a study of the construction, and particularly the presence of a central hearth, surrounded by a system of posts supporting the central portion of the roof, it appears that the ancestral form of the oval Kelte Minar dwelling was the round house, with the characteristically constructed roof with a central opening. Like the Kelte Minarian pottery, this type of building was subjected to the influence of the rectangular dwelling connected with the culture of the Anau cycle.

The pottery varied greatly, both in form and in ornament. In addition to the many ornamented vessels of the type described in 1939, there were found fragments of vessels, separate zones of which were covered with curvilinear ornament formed by intersecting arcs of a circle impressed by means of a sickle-shaped stamp.[6]

Of particular interest were the newly discovered boat-shaped vessels, thin-walled, deep cups, resembling an egg dissected along the horizontal axis. One of these vessels, once painted red, was decorated along the edge with a broad band of hatched ornament, divided by vertical lines into rectangular ornamental fields. Together with the boat-shaped vessels, there were also smaller, oval cups, of somewhat angular outline, unornamented or slightly ornamented. One of these cups had at its narrow end two conical protrusions, forming a handle, reminiscent of the twin lugs on some of the anthropomorphic jars from Tepe Hissar and Kish [7] and the central European Neolithic, where they symbolized breasts. Although the boat-shaped vessels stand alone among all forms of Neolithic and Bronze age pottery found in the U.S.S.R., the angular-oval cups have some parallels among the Uralian Bronze age pottery of the second millennium B.C. which are reminiscent of Kelte Minarian types.

Numerous fragments of large vessels were covered solidly with "fir tree" ornament, with parallels in the Afanas'evo culture; in the Trans-Uralian cultures of the Shigir type; and a particularly close parallel in the pottery of eastern Turkestan, collected by Sir Aurel Stein, associated with microliths also closely related in type to the Kelte Minar implements in the sands of the Yarkend Darya Basin, 45 kilometers from the river, and at the mouth of the Kuruk Darya.

It appears, therefore, that the Kelti Minar culture emerges as one of the late Neolithic cultures with a microlithic tradition and with the area of distribution extending from the Aral Sea to Sinkiang. It was also apparently historically more or less connected with contemporaneous cultures in the Gobi area. The sphere of influence of the Kelti Minarian elements extended North as far as the mouths of the Ob River, and it is indicated strongly that the early complexes of the Shigar cycle of cultures were formed under strong influence of the Neolithic cultures of the Aral basin. The cultural impact of the Neolithic cultures of the Kelti Minarian cycle (in the widest sense of the word) is also strongly apparent in the South Siberian Neolithic, where it becomes mixed with the local macrolithic tradition and survives in the Afanas'evo culture, which had also possibly absorbed additional influences of later derivatives of the Kelte Minarian.

To the South the area of this culture goes beyond the frontiers of Central Asia, and includes northern India down to the Vindhya Hills in the South and Burma in the North. Unfortunately, the pottery of these areas has not been completely explored; it is, however, definitely in the cycle of

[5] Artificial cranial deformation to elongate the head is practised by this tribe. (H. F.)

[6] Most of these fragments were found 300 m. S. of the large dwelling Djanbas-Kal'a No. 4, on the site of a completely destroyed dwelling of similar type referred to as Djanbas-Kal'a No. 5.

[7] In the great temple complex dominating eastern Kish the Field Museum-Oxford University Joint Expedition excavated many anthropomorphic vessels with twin breasts. These votive objects were part of the fertility cult whereby honor was paid to Harsagkalemma—the Earth Goddess. (H. F.)

primitive pottery with stamped ornament. The flint inventories are similar to the subsequent types. In this connection there should be mentioned the frequently described connections between the tongues of pre-Aryan India, Dravidian and Munda, and the Finno-Ugrian languages, and particularly the Ugrian languages of northern Eurasia.

Since the ethnographical map of the intervening areas for the periods after the beginning of the first millennium B.C. is sufficiently well known to exclude the possibility of any connection between the Finno-Ugrians and the Munda and Dravidians through the intervening wedge of the Indo-Iranian peoples, the historical roots of these connections must be found only in the earliest periods. Tolstov believes that the second millennium B.C. should also be excluded, a period during which the ethno-cultural unity of the Eurasian steppes from the Don to the Minusinsk area as characterized by the stable complex of the Srubno-Andronovo culture which finds no cultural parallels south of the Central Asian steppes became crystallized. On the other hand, the fact that the Upper Palaeolithic cultures of the extensive territory lying between northern India and the mouth of the Ob River in Siberia are typologically and chronologically similar indicates that the Upper Palaeolithic period was decisive for the process of emergence of Indo-Ugrian parallels, and that the Aral Sea area was one of the most important links. Furthermore, the line drawn from the mouths of the Indus to the Helmund, along the Hari Rud and the Murghab rivers and, further on, along the Irtish, Turgai, and possibly the Emba rivers in Trans-Uralia, is the straightest and the most accessible route for Indo-Uralian relations. The only argument against the accessibility of this route, the presence of many deserts, can be now overruled through the discovery of the rich water supply of this area which extended to the zones of the neighboring rivers during the pre-agricultural period. Apparently this line, and not the difficult mountain passes of the Hindu Kush and the Pamirs, was the most important axis for the processes of ethno-cultural consolidation of the ancient tribes of India, Iran, Central Asia and eastern Europe. These were responsible for the appearance of common traits in the languages of pre-Aryan India and pre-Indo-European eastern Europe, and later on for the ethnographical formation of the eastern group of the Indo-Europeans.

The exceptionally rich flint inventories from this site were further enriched during 1940. In addition to white and brown flint of excellent quality, many implements of various varieties of jasper (*yashma*) were excavated. The implements included microlithic blades, scrapers, burins, long scrapers, perforators, arrowheads with one barb flaked only on one side and made from flakes, flint points with biface flat retouching, the latter type being typical for the Uralian and Siberian Neolithic. Some larger crude retouched knife-like laminae were also found, as well as polished, flat slate knives with rounded working edges. It was impossible to determine the form of the few fragmentary large polished greenstone implements (axes?); it is certain, however, that these were not perforated axes.

Bone implements were represented mainly by many long cylindrical-conical arrowheads, sometimes slightly grooved (belted) horizontally. In addition, there came to light two large bone implements, requiring extensive reconstruction, but apparently handles for flint inserts. Many flat polished sandstone tablets were found around the hearths, in association with a quantity of yellow and red paints.

Ornaments were represented abundantly by beads and pendants of shells, colored stones, and bird bones. Cylindrical shell and bone perforated beads predominated, together with oval beads perforated at one end; flat, stone and bone pendants, and flat half shells perforated near the margins.

Of great interest were the details connected with the location of the cultural stratum. The dwelling was located upon a sand dune, upon the stamped-down summit of a sandhill (*barkhan*), facing with its steep concave side to the North. After the dwelling was destroyed by fire and then abandoned, it was covered by sand, which formed several hillocks during the lifetime of the other similar dwellings nearby. The relief of these hillocks had been preserved by the thin, clayey crust formed over them during a flood from nearby lakes which had apparently occurred about the beginning of the first century B.C.

The concatenation of these data suggests that during the period from the third to the second millennium B.C. the direction of the prevailing wind in this area was the exact opposite of that found at the present time. Since the prevalent northwestern winds are now determined to a large degree by the extensive area of the Aral Sea, it is probable that during the earlier period the

situation differed greatly from that of today, the sea being then either much smaller or having consisted of a series of large lakes and marshes in the area of the joint delta of the Amu Darya and the Syr Darya.

New information has also been secured relating to the later stages of Khwarazmian history. To the northeast of Angka-Kal'a, Tolstov discovered a badly weathered site of the Bronze age (Taza-bagh-yab culture), yielding some excellent specimens of the richly-ornamented, flat-bottomed ware. At this time it is possible to establish the sequence of the Kelti Minar, the Taza-bagh-yab and the Amirabad cultures. The middle cultures preserved, together with the new elements linking them with the Srubnaia and Andronovo cultures, many peculiarities of the Kelte Minar ornamentation, and at the same time had the protrusion on the bottom typical of the Amirabad culture, which was most richly represented. Many new sites of this culture were discovered in the sandhill area northeast of Narindzhan, between the ruins of Kosh Parsan and Yakke Parsan. A continuous line of sites was found along the southern edge of the depression to the north of the Djanbas-Kal'a prominence, a few kilometers to the east of Djanbas-Kal'a Site No. 4. Similar sites were also discovered along the great canal south of Bazar-Kal'a. Of particular interest were the two sites discovered by IA. G. Gulianov: (a) Djanbas-Kal'a, No. 6, in which was found an untouched cultural stratum of the Amirabad culture; and Djanbas-Kal'a, No. 7, containing the well preserved remains of a dwelling of that period.

The rectangular clay dwellings of the Amirabad period, which are attributed to the period from the eighth to the seventh century B.C., retained completely the character of communal houses. The "Great House" of Djanbas-Kal'a, No. 7 parallels the slope of the prominence to the south on the depression, and like the Djanbas-Kal'a No. 4 dwelling was built upon a sand dune. This dwelling was 77 m. long and 20 m. broad. The walls were 1.5—2 m. thick. An interior wall divided the dwelling into two parallel corridor-like apartments, 5 and 10 m. wide. This type of "Great House" is connected generically with the Kuzeligyr *gorodishche*, discovered by the members of the Expedition during 1939 at Cherman Yabe. This latter was the most ancient type of *gorodishche* with a "dwelling wall." On the basis of the pottery, which was wheel-made with horizontally-notched surface reminiscent of the Achaemenid metal vessels and vessels depicted upon Achaemenid bas-reliefs, as well as Anau III pottery, associated with many Scythian arrowheads of a relatively early type, the Kuzeligyr *gorodishche* was attributed to the Achaemenid period, fifth to fourth, or possibly sixth to third century B.C.

It must be recorded that during joint excavation with IA. G. Gulianov of the Amirabad culture sites near Narindzhan, Tolstov found, in association with the late Amirabadian pottery, a few forms typical of the culture of "*gorodishches* with dwelling walls." For example, the rims of the vessels were straight and tall, the outer surface protruding beyond the walls of the vessel in such a way that the transition from the rim to the wall formed a rectangular channel. This furnishes us with a direct transition from the Amirabad culture to the highly developed culture of "*gorodishches* with dwelling walls" which, in its turn, is connected through its pottery with the Kanguy culture of the third century B.C. to the first century A.D. In this way we have succeeded in tracing a continuous chain of monuments from the Neolithic to the Hellenistic. In the following pages we shall see that this chain continues.

Although the Hellenistic sites were not included in the main objectives of the 1940 Expedition, a few significant facts must be mentioned. The dating of the Great Guldursun fortress, described by A. I. Terenozhkin in 1937 as a mediaeval monument, should be reexamined. This fortress is now attributed to the Hellenistic period and belonged to the Kanguy-Kushan culture. The strong walls were built of antique brick, and retained traces of embrasure of ancient type and many walled-in arches which apparently once led to the close-set towers, destroyed during later reconstruction.

During the Kanguy-Kushan period great Guldursun was a city. Many mounds in the courtyard of the *Gorodishche* were remains of buildings containing red pottery and many Kanguy-Kushanian figurines. At the same time only isolated specimens of mediaeval ware were found. This immense ancient fortress, which was partly ruined, was modernized during the Middle Ages, probably during the twelfth or thirteenth centuries. Of the double walls, only the outer, thicker and better preserved, had been retained, together with the clay foundation of the inner wall serving also as a corridor between the walls. The embrasures of the outer wall were filled. The ancient

walls were covered with an outer facing of clay. In place of the old towers, many of which had been torn down or reused as foundations, new towers, set much farther apart, were erected. Opposite and in front of each wall tower was erected a second tower connected with it by a bridge. The absence of traces of intensive life upon the *Gorodishche* suggested that during the epoch of the Khwarazm-Shahs this fortress had a merely strategical value.

Important new data were obtained regarding the antique "house fortress" of Djildik-Kal'a. From the 1939 study of the utilization of sand as building material in the socles of the house at Aiyaz-Kal'a, No. 3, of Kunerli-Kal'a and of the walls at Zamakhshar, new evidence for the study of this type of structures was obtained. The socle of Djildik-Kal'a was a very complex structure. It consisted of a series of brick walls perpendicular to the sides of the castle, forming a series of corridor-like passages, filled with layers of unbaked bricks separated by strata, 10–12 cm. thick, of white, alluvial sand. On the outside this construction was covered with a brick shell. Similar masonry, striated with sand, had been discovered in the foundations of the "House of Fire" of Djanbas-Kal'a during 1939. The basement (socle) of Djildik-Kal'a appeared to have been constructed in accordance with the building technique which was as common for the antique period in Khwarazm as the solid sand socles described in connection with Aiyaz-Kal'a.

By comparing the series of Khwarazmian monuments with sand or sand-and-brick socles with the monuments of the Amirabad, and, possibly, the earlier periods, we can advance the hypothesis that this structural form, specific for Khwarazm, is a continuation and elaboration of the primitive tradition of building upon sand dunes traceable from the Neolithic period. The Kelte Minarian house in Djanbas-Kal'a, No. 4, the Amirabadian house in Djanbas-Kal'a, No. 7, the Achaemenid *Gorodishche* Kuzene-Chiz, the Kanguyan "House of Fire" in Djanbas-Kal'a, the Kanguy-Kushanian "house-castle" in Kunerli-Kal'a, the Kushanian Aiyaz-Kal'a, No. 3, and Djildik-Kal'a, form a continuous chain of structures built upon first natural, later artificial, sand hills. The reason for this phenomenon was obvious: even now the wet, marshy, frequently saline soil of the Amu is an enemy to builders. During the earlier, pre-agricultural periods, when the large irrigation canals had not yet drained that plain, the situation was infinitely worse. In this connection Ibn Yakut wrote in the thirteenth century:

"The soil of Khwarazm is bad and is located upon marshes with many places where water seeps through."

A later period from which the Expedition secured many new materials has been named the Kushano-Aphrigidian period, attributed to the period from the third to the fifth century, lying between the epoch of the Kushanian culture (Aiyaz-Kal'a) and the flowering of the Aphrigidian culture (Barkut-Kal'a).

To this period belongs a series of *gorodishches*, some of them newly-discovered, such as Lesser Kawat-Kal'a west of Narindzhan, Yakke-Parsan, northwest of Uy-Kal'a and Eres-Kal'a on the lower course of the Kelti Minar Canal. Other *gorodishches* discovered previously, but described, include Toprak-Kal'a, which was first investigated by Tolstov in 1938, and Kosh Parsan, Nos. 1 and 2, first visited by Terenozhkin in 1937. These monuments vary both in type and in period. Eres-Kal'a and Toprak-Kal'a, to which must also be added Kirk-kiz-Kal'a, are all towns founded during the Kushanian period, but continuing a full-fledged existence during the early Aphrigidian period down to the fifth or sixth century when they fell into decline. The two Kosh-Parsans, Yakka Parsan and the lesser Kawat-Kal'a, are early Aphrigidian castles, apparently built not earlier than the assumption of power in Khwarazm by the Aphrigid dynasty, not earlier than the end of the third to the beginning of the fourth century A.D.

Toprak-Kal'a *Gorodishche* yielded many coins, mainly of the early Aphrigidian period. Many Kushanian coins were also found. Late Aphrigidian coins, common on the surrounding mounds, were rarely unearthed. A shaft sunk in the *Gorodishche* disclosed that this site, greatly damaged by salt marsh vegetation, had a cultural stratum 4 m. thick, in which there could be discerned 10 cultural horizons, separated by well preserved clay floors, as well as by less significant stratifications. The lower horizons yielded typically late Kushanian pottery. The upper horizons, as well as surface finds, included early Aphrigidian pottery, not later than the fifth or the beginning of the sixth century. Thus the cultural strata at Toprak-Kal'a embrace no more than four centuries.

The ground plan of the *Gorodishche* was in the form of a regular rectangle, 450 by 270 m., extending North to South. The *Gorodishche* is sur-

rounded by badly preserved thick walls of antique brick with many square wall towers. The northwestern corner of the fortress, occupied by the extensive castle of the ruler, consisted of a courtyard, 180 by 180 m., with a complex ground plan and with a majestic three towered dungeon, containing many vaulted apartments. This dungeon was preserved to the height of 20 m. The southeast corner of the castle was adjoined by the remains of an extensive complex of buildings grouped around a very large rectangular building with double walls separated by a passage, which to the south was adjoined by a long corridor leading toward the main street of the *Gorodishche*. The presence of a quantity of white ashes within the rectangular building, as well as the general plan, reminiscent of the plan of the fire temple in Shapur, suggested that this was the city temple. The central building of the temple was completely surrounded by a group of elongated corridor-like structures, of which only traces have been preserved. The entrance to the southern corridor of the temple was adjoined by a square yard surrounded by a portico of columns. The angle formed by the castle, the temple group, and the eastern wall of the settlement was occupied by a square devoid of building remains, supposedly the bazaar. The residential part was bisected by a street leading from the South gate to the castle. On both sides of this street, separated by symmetrical alleys, were located 10-12 city blocks. Each block was a continuous subdivision into houses, of adjoining rooms, as many as 120 or even 200 in each block. In the center of practically every block stood a raised section, frequently in the shape of a brick platform. Tolstov considered them to be the remains of central towers, the prototype of Aphrigidian *Koshk*, occupying the middle of each block.

The general picture of the late phase of the early Khwarazmian city has now been disclosed and once again excavations concur with literary sources which state that at this period this Central Asia town consisted of a group of large, family dwelling communities associated with an archaic type of social organization. In general, this was the same social organization as that of a fortified Kanguyan settlement of the Djanbas-Kal'a type, retaining even such traits as the division of the city into two quarters by means of a street.

The new discoveries were the mighty three-towered castle dominating the city, and the gigantic estate-mansion, dwarfing even the large family dwellings of the *shahristan*.

The architectural composition of Toprak-Kal'a, with its towers of dwelling blocks, the castle of the ruler, and the vertical treatments of the central building, are closely associated with architectural forms of the ancient East.

Thus, the development of the late Classical architecture of Khwarazm followed the course passed many centuries before by the architecture of the ancient Duab. It is characteristic that large castles analogous to those at Toprak-Kal'a have been found on other *gorodishches* of the period, at Eres-Kal'a and Kirk-kiz-Kal'a, in contradistinction to the earlier *gorodishches* of the Bazar-Kal'a type in which the citadel is devoid of habitations, serving as a *refugium* and a place of communal meetings and rites, as in the case of the House of Fire at Djanbas-Kal'a.

It is impossible to reconstruct the internal plan of the Eres-Kal'a *Gorodishche*, with the exception of the castle, because the sand dunes completely covered the site. The outer plan, however, differed from that of Toprak-Kal'a. The outline of the *Gorodishche* was that of a sector of a circle, the straight side being formed by a wall adjoining the central castle, and the curved side by a semicircular wall with many towers.

The decline of city life was expressed clearly in the Toprak-Kal'a settlement. During the fifth to the sixth century a sharp decline in crafts was observed: for example, the pottery became coarser. A strong admixture of coarse sand is found in the clay used in manufacturing storage vessels (*khums*) and other large pots. There was a great increase in coarse home-made pottery, made without the wheel. By the sixth century the town was abandoned, becoming a large necropolis. To judge by coins excavated in the surrounding countryside, life continued down to the end of the Aphrigidian period.

The country castles of the Kushan-Aphrigidian period, fourth to fifth century A.D., were distinguished by the following basic characteristics, separating them from those of the Late Aphrigidian period:

1. The dungeons were built of classical brick, the outer walls of unbaked clay.

2. The dungeons were situated in the center of the courtyards in contradistinction to those of the late Aphrigidian period, which were built in the corner near the gates.

3. The castle had a ground plan in the form of two or three concentric squares.

4. The inner and outer courtyards formed two terraces rising 1.5—2.0 m. each above the level of the plain; the highest terrace was crowned by the dungeon.

5. The central citadel of the most archaic of the sites (the Lesser Kawat-Kal'a) was not a single roofed-over tower, but was a hollow building enclosing a large courtyard once surrounded by various structures. The walls of this citadel (the word dungeon could hardly be used) were pierced by many high loopholes, like those of the classical fortification, but having square lintels like those of the Aphrigidian period instead of the earlier lanceolate loopholes. From this there rises a mighty dungeon, the walls of which above the socle are effectively decorated by semi-columns, surrounded by three squares of clay walls, which are highest toward the center of the enclosure, and lowest at the periphery.

In general, these early Aphrigidian or Kushano-Aphrigidian castles, and particularly the castle of Yakke Parsan, which is located in the center of the courtyard, were reminiscent of Al-Biruni's description of the castle of Fir, near the old capital of Khwarzm, the city of Kyat, which he attributed to the fourth century A.D.

"And [Afrig] has built his castle [Kasr] inside al-Fir in the year 660 after Alexander [of Macedon]. And they reckon the years from him [Afrig] and from his successors. And this al-Fir was a castle near the city of Khorezm [Khwarazm] with three walls built of clay and unbaked brick (*libn*) one inside the other, exceeding each other in height; and exceeded them all the castle of the kings, as did Gumdan in Yemen when it was the residence of the Tobas."

The period of the fifth to the seventh century A.D. was the period of decline of city life in Khwarazm. Toprak-Kal'a and other Kushano-Aphrigidian towns became deserted, while Toprak-Kal'a became an extensive necropolis.

The coins found at Toprak-Kal'a were numerous and significant. A series of Kushanian coins must be mentioned, also a series of Kushanian coins overstruck with the Khwarazmian *tamga* in the form of a Latin "S," and the numerous, largely early (group AX) Aphrigidian coins. Most important in the latter group is a silver tetradrachm, obviously the earliest coin in the series, and hardly later than the end of the second or the beginning of the third century A.D. The obverse of the coin bears the effigy of a bearded king in a composite crown, being crowned by a schematically delineated Nike; on the reverse is the typical Aphrigidian horseman facing to the right, with the Aphrigidian *tamga* to the left and behind the horseman, and with a barbaric imitation of a Greek legend in a semicircle above and a straight line below the effigy of the horseman. This coin undoubtedly forms the link between the Aphrigid and the *Geraya* coins, filling the gap which Tolstov had pointed out in a note [8] on a contribution by A. N. Zograf. Associated with the early Aphrigidian coins were found many smaller copper coins depicting a king wearing a characteristic Aphrigidian crown on the obverse, and a peculiar *tamga* in the form of a three pointed swastika-like sign surrounded by an inscription in the Khwarazmian alphabet on the reverse. Since coins of this unique type have been found only at Toprak-Kal'a, it is quite probable that they represent the coinage of a local prince dated about the fifth century A.D.

A copper coin of Chinese type, with a square perforation, found on a hillside (*takyr*) near Toprak-Kal'a had a legend in the local alphabet (of Aramaic origin). The bad state of preservation of this coin made it impossible to determine whether this was an instance of penetration into Khwarazm of Soghdian coinage, or a locally issued coin. If the latter possibility is correct, then the coin should be dated in the reign of Shawshafir, middle of the eighth century, at the time when Khwarazmshah Shawshafir attempted to obtain a Chinese protectorate. Several coins of Shawshafir, already described, have also been found near Toprak-Kal'a.

Since the discoveries made during 1940 filled many chronological gaps in the data collected during the seasons of 1937—1940, an attempt can now be made to describe the chronological succession of the various cultures of Khwarazm.

A. Prehistoric Khwarazm

I. *Ketteminar Culture.*—Third to beginning of second millennium B.C. Neolithic. Fishing and hunting. Large oval houses of wood and rushes (reeds). Round-bottomed, richly ornamented, bordered pottery. Ornament in ringlike zones, filled by various stamped designs and cross-hatched drawings. Boat-like vessels. Flint and bone inventories. Typical monuments: Djanbas-Kal'a, Nos. 4 and 5.

II. *Tazabaghyab Culture.*—Second to beginning of first millennium B.C. Bronze Age. Hoe agriculture, pastoral type of animal husbandry. Type of

[8] *VDI*. 1939, No. 2.

dwelling unknown. Flat-bottomed, thin, colored, handmade pottery, ornamented by stamped and incised design. Main element of ornament: unclosed triangle. Typical monuments and sites: Angka-Kal'a, No. I; Tashik-Kal'a, Nos. 1 and 2, etc.

III. *Amirabad Culture.*—First half of first millennium B.C. Early Iron Age. Agriculture and animal husbandry. Long, rectangular communal houses of clay. Dark flat-bottomed handmade pottery, lightly ornamented by incised ornament. Typical monuments; Djanbas-Kal'a, Nos. 1, 2, 6, 7, and others.

B. Ancient Culture

IV. *Culture of* gorodishches *with Dwelling Walls.*—Achaemenid period. Middle of first millennium B.C. (sixth to fourth century B.C.). Building of great canals. Khwarazm enters into the Achaemenid imperial system. *Gorodishches* with inhabited walls. Pottery manufactured upon hand-operated wheel; horizontally ridged surface. Storage vessels (*khums*) and large vessels with straight necks, with straight angle transition to the body. Coarse paste (clay) with admixture of coarse sand; uneven firing. Cups without discoid base. First appearance of engobe, red on cups, white protruding. Typical monuments: Kuzeli-Gyr; lower stratum of Bazar-Kal'a.

V. *Kanguy Culture.*—Hellenistic period. Third century B.C. to first century A.D. Flourishing of the Kanguyan-Khwarazmian state, cities, crafts. Fortified, rectangular villages. "House of Fire," the focal point in the social life of the settlement. Town-planning unclear. Citadel is *refugium* and place of worship. Pottery, black or red, or light painted with black and red; made on foot-operated potter's wheel. Red, pierced and painted ornament in the form of triangles descending upon shoulders of pots. Storage vessels (*khums*) with rounded and high necks separated from the body by a *relievo* belt. Cups with discoid bases. Stemmed cups. Light-colored, thin-walled handmade pottery. Large dishes (or trays) with vertical walls (or rims). Many figurines of human beings and animals. Elongated large bronze arrowheads. Very large querns. Beads: sardonyx; large bi-pyramidal of paste; small, of glass; rectangular, of slate. Rings with oval stone (or seal). Oval seals, two-sided and scaraboid, with images of horsemen, griffons, sea horses, birds. Typical monuments; Djanbas-Kal'a, Koi-kriglgan-Kal'a and Less Kyrk-kiz-Kal'a.

VI. *Kushan Culture.*—Roman period, first to third century A.D. Continued flourishing of classical Khwarazm. Transition from fortified communal settlements to unwalled villages, consisting of separate large-family farmsteads. Sharp distinction of farmsteads from dwellings of the aristocracy. Preservation of large, communal dwellings in the form of blocks in the cities. The citadel ruler's castle. Pottery with red engobe, and with white engobe. Painted pottery largely disappears. *Khums* without neck, with low and straight lip. Cups with discoidal base. Saddle flasks with flat side. Light-colored handmade thin pottery, associated with the coarser varieties. Pot lids of coarse ware with pit ornaments along the edge. Small three-sided bronze arrowheads with hidden haft. Querns. Appearance of first handmills. Beads and rings as in the preceding period. Typical monument: Aiyaz-Kal'a, No. 3.

VII. *Kushan-Aphrigidian Culture.*—Third to fifth century A.D. Decline of the ancient culture of Khwarazm. Cities of the same type as before, but many are abandoned toward the end of the period. Transition to castle settlements. Castles with outer walls of *pakhs* (compressed clay) and with either a brick dungeon in the center, or with a citadel with inner courtyard. Concentric square plan; terraced (inner courtyards higher than the outer). Pottery shows gradual transition from Classical to Aphrigidian forms. Decline of city (craft) made pottery. Specific forms of pottery; *khums* with straight, high neck, later replaced by *khums* with two highly protruding belts on neck. Large, coarse vessels; dishes with sculptured ornament along the edge. Two-horned kettle-stands. Pitchers closely related to the Aphrigidian type with unornamented handles sharply narrowed toward bottom. Ancient forms of pottery completely disappear toward the end of period. Early Aphrigidian coins (A-X group). Typical monuments; Toprak-Kal'a and Yekke Parsan.

VIII. *Aphrigidian Culture.*—Sixth to ninth century A.D. Sharp diminution in number of towns. Emergence of the new type of town in the form of settlements attached to the castles—farmsteads of great feudal lords (Barkut-Kal'a). Scattered settling in fortified castle-farmsteads. Dungeons with vaulted or solid socles, excentrically located (in the corner or in the middle of one of the walls). Dungeons decorated by semi-columns without loopholes, or with false loopholes. Very large *khums* with oval lips, decorated by oblique notches or ringlike depressions. Thin-

walled pitchers for carrying water, with lips triangular in cross-section and wide flat handles decorated by stripes or by depression made by fingers. Variegated hand-made pottery. Large three-sided hafted arrow and javelin points. Large thin handmills. Globular sardonyx beads. Rings with round stone (or shield). Round seals of varying sizes. Aphrigidian coins (Group BB). Typical monuments: Barkut-Kal'a and Tashik-Kal'a (Upper stratum).

C. Medieval Khwarazm

IX. *Aphrigido-Samanid Culture.*—Ninth to eleventh century. Castles with large central building but without dungeons. *Pakhs* (compressed clay) walls. Corner towers round or square. The semi-columns decorating the towers show the transition from the Aphrigidian to the Khwarazmshahian type. Pottery: black with sculptured ornament, glazed, with under-glaze painting in warm reddish-brown tones. Isolated finds of Soghdian relief wares of the Samanid type. Typical monuments: Buran-Kal'a, Naib-Kal'a, "old town" in Narindzhan.

X. *Khwarazmshahian Culture.*—Eleventh to thirteenth century. Reoccupation of previously abandoned lands. New rise of city life, crafts, commerce. Sharp differentiation between the feudal castle and the unfortified peasant farmstead, while the latter retains its "great family" character. Practically complete domination of *pakhs* (unbaked clay) in the building industry. Small square unbaked bricks; wide use of burnt brick. Lanceolate arch. *Kantar-Khanas.* Walls decorated by thin semi-columns in high relief, connected by lanceolate arches. Mosques ("People's ritual buildings"), decorated by means of ornamental brickwork. Pottery: black, with exceptionally rich sculptured and carved ornament; glazed, with subglaze painting; lustre appears, and also subglaze painting in colder tones of the scale. Typical monuments; Kawat-Kal'a and Djanlik-Kal'a.

XI. *Khwarazmian Djuci Culture.*—These monuments have not been specially investigated by the Expedition. General characterization has been given in IAakubovskii's monographs: (a) "*Razvaliny Urgencha*," The Ruins of Urganz; (b) "*Proiskhozhdenie reneslennoi promyshlennosti Saraia Berke*," The Origins of Handicraft Industries of Sarai Berke, and others. Typical characteristics: transition to the polychrome tile decoration of religious and lay buildings; wide use of pottery with turquoise, blue and green glaze. Typical monument: Kunya Urgench.

Eugene Prostov Henry Field

BOOK REVIEWS

CHANHU-DARO 1935–36, by *Ernest J. H. Mackay*. Pp. xv + 338, double frontispiece, pls. 96. New Haven, American Oriental Society, 1943.

The work under review, which appears as vol. 20 in the American Oriental Series, is a report on the excavations conducted in the Indus Valley on behalf of the American School of Indic and Iranian Studies and the Boston Museum of Fine Arts. The director of the excavations and the author of the volume, Mr. Mackay, shows again his customary thoroughness and general competence both in the nature of the excavations and in the faithful detail with which the results are reported.

The site chosen, Chanhu-daro, lies midway between Mohenjo-daro and the delta of the Indus and consists today of three mounds which the author believes were once part of a single artificial elevation. The work was limited to a single working season with the result that the excavations as a whole were more exploratory than comprehensive; but the area uncovered and the objects recovered were considerable and worth while. The finds represent a number of different cultures, namely: (1) Harappa—sometimes known by the vague term "Indus Valley Culture"; (2) Jhukar; (3) Jhangar; (4) Trihni. As is usual in the Indus Valley, the Harappa culture was responsible for the great bulk of the buildings and finds. No evidence was encountered of the pre-Harappa Amri culture, though as at Mohenjo-daro the water level prevented the excavators from reaching the earliest Harappa levels; and the evidence of Jhukar and Trihni were isolated finds unassociated with contemporary habitation levels.

In Chapters I through V the author describes in detail the course of the excavations and the architectural finds in the various trenches and levels investigated. The report is thorough and clear, though somewhat handicapped by the very small scale in which the accompanying plans are rendered. The remaining eleven chapters of the book painstakingly describe the finds, with Chapter XV being an exhaustive study of the weights of Chanhu-daro and the Harappa culture by Miss Hall and Mr. Hemmy, in which a unit of 13.64 grams and a ratio of 16 prevail. Chapter XVI, by Messers Krogman and Sassaman, is a study of the single Chanhu-daro skull; the following opinion as expressed by the authors illustrates the difficulties presented by this object: "If this skull had been assembled from odd parts it could not present a more conflicting picture."

In a book of such a comprehensive nature it is inevitable that there arise differences of opinion between the author and the reader. For example, in the interpretation of the designs on the Harappa culture painted pottery the student of primitive designs will find many points of difference, as in the case of the so-called "comb pattern" which is treated literally rather than in the light of its true animalistic origin. Also the statement that no human figures are found in the painted pottery of the Harappa culture would seem to ignore the very interesting sherd from Harappa itself, illustrated in the *Archaeological Survey of India, Annual Report, 1927–28*, pl. XXXV, g. Again, in his absorption with the differences between the pottery of the Harappa culture and that of either the preceding Amri culture or the succeeding Jhukar culture, the author has overlooked the very real similarities that the designs of these two have in common with those of the Harappa period. In fact, the similarities which he quite rightly points out as existing between Jhukar and Halaf to the west apply with equal strength to similarities between Harappa and Halaf. Concerning the curious and unique pottery head illustrated in pl. LIII, 11, it would seem more reasonable to assume that it was Harappa in date, if not in culture, since it came from a Harappa level, rather than Jhukar with which it has no known similarities whatsoever. The very Sikh-like beard noted by the author has at least some resemblance to the statuary from Mohenjo-daro. Certainly it is not Sumerian in influence as he implies.

In physical make-up the book suffers from the lack of a map showing just where the site lies in relation to the Indus and to other sites of similar or related cultures. Also, the discussion of the architectural remnants of the Jhukar period could have been greatly clarified had a plan been included showing by themselves the structures originating with or re-used by the Jhukar inhabitants of Chanhu-daro. It would have been a convenience, too, in a book with so many plates and so many references to them, to have had the plate numbers in Arabic numerals rather than in cumbersome Roman.

Perhaps the most serious difference that the reader will have with the author is his tendency to consider this book in the light of an addendum to his previous publications on Harappa culture sites, rather than as an independent literary entity. Thus the objects are arbitrarily grouped into the classes that seemed most appropriate when he was describing the finds from Mohenjo-daro, and their description is concerned largely with their variation from the Mohenjo-daro norm rather than with their character as independent finds. Most important of all, the subject of a date for the Harappa culture—a question which is still far from settled—is also referred back to the previous publications and only scantily considered anew in the light of the material offered by Chanhu-daro itself. Few individuals, or institutions, are fortunate enough to have at hand both of the sumptuous Mohenjo-daro publications on which the author relies. His discussion of the beads also suffers from his unwillingness to include material on bead-making at Chanhu-daro which he had previously published in the *Journal of the American Oriental Society*.

In many ways the most important contribution that the excavations at Chanhu-daro have to offer is their lack of markedly new material in the Harappa levels, for by hewing so to the pattern set by Mohenjo-daro and Harappa they furnish further confirmation of the amazing homogeneity of the Harappa culture. This is further stressed, as at Mohenjo-daro, by the absence of significant change in the pottery from the earliest to the latest levels. It is this consistency of culture, with its implication of a long history extending far beyond the earliest and the latest known Harappa culture levels, that makes our search for its remote beginning and ultimate end so absorbing.

The author has been able to fix the chronological position of Chanhu-daro in relation to Mohenjo-daro with some certainty, for considerable numbers of individual artifacts or characteristics which are common to the early levels of Mohenjo-daro appear at Chanhu-daro only in the upper strata. The city shows evidence of at least three floods with a rebuilding after each disaster. A measure of the completeness of the destruction wrought by these floods lies in the lack of conformity, in every case, between the earlier structures and the rebuilt ones. In fact, the author believes that it was these repeated catastrophes that led the Harappa culture peoples to desert the Indus for the plains to the east where they were absorbed by more aggressive peoples. The naïveté of their weapons can leave no doubt as to their essentially peaceful nature and the ease with which they could be overcome. It might also be argued that since these same weapons show less influence from the West than any other type of object, therefore a local or not far distant source existed for the copper and bronze that was used.

Apart from the main consideration—the Harappa culture—the site has produced the finest examples of the Jhukar painted pottery that we have, though the number of specimens in relation to the Harappa culture sherds is small. The author's equation of the Jhukar culture with Hissar III and the First Dynasty of Babylon is an acceptable working premise and agrees in the main with the conclusion reached independently by Major Piggott in *Antiquity* xvii (Dec., 1943).

In closing, the author, the publisher and the printer should be thanked for giving us a book so complete in its coverage, so generously illustrated, and so handsomely printed.

R. F. S. STARR
LIEUTENANT, USNR

GREEK TEMPLES, by *Isabel Hoopes Grinnell*. Pp. xxi + 60, pls. 54, map on inside cover. New York, The Metropolitan Museum of Art, 1943. $7.50.

A selection has been made of twenty-five of the best known Greek temples, each of which is presented in a brief chapter. Although the presentations are not too detailed to make interesting reading, most of the individual peculiarities of each building, provided they are not too technical to be readily understood by the layman, are described. An attempt is made to place each building in its proper setting, both as to place and time, and to give such architectural or historical information as may be of interest, together often with some notice of the course of the explorations carried on at the site. The effect is that of a cross between a good guidebook and a well written book of travel.

The brief introductory chapter deals with Greek temples in general and takes up some of the technique of their construction, including a brief consideration of the development of the orders, especially the Doric. It is noted that the author of the book accepts the triglyph as the stone version of the beam ends of the original wooden version of the temple. Inasmuch, however, as there is no attempt to present any original material, and as the book is merely a careful compilation of information from previous publications, it would be inap-

propriate to comment here on this, as on other controversial questions, many of which the author recognizes.

Each succeeding chapter is headed by a cut showing the plan of the temple to be considered, the date, or most probable date of the building, and the description familiar to all readers of Histories of Architecture, "Ionic, Decastyle, Dipteral, with twenty-one columns on the flank," or whatever statement may be called for. Very sensibly, the dimensions of the stylobate are also given, both in feet and in meters. This reviewer declines to attempt to verify all the conversions, but a number chosen at random appear to be correct. At the end of the chapter is a short bibliography in which the most important sources for the study of the temple are starred, and throughout the text there is a sufficiency of footnote references.

A good architectural glossary is marred only by the substitution of a ç for the second p in the word propylaia.

The plates are well selected and well executed in collotype. Most of the photographs and drawings are familiar ones, but there are a few which I do not recall ever having seen before. The Temple of Athena Nike is illustrated by a photograph taken in 1940, after its most recent reconstruction, and the little building appears to better advantage than before it was pulled down and built into a Turkish bastion. The cover of the book is a striking photograph of the Parthenon seen from the region of the Pnyx.

Although a number of familiar temples in Sicily and Southern Italy have been omitted, Greece proper is well covered. Asia Minor is represented by Assos, Sardis, Ephesos and Didyma. The work is interesting in that it gives in compact form a good overall view of the Greek Temple, and also should be useful as a source of reference to the better known examples.

NAVAL AIR STATION RICHARD STILLWELL
QUONSET POINT, R. I.

LA NECROPOLI DEL PORTO DI ROMA NELL' ISOLA SACRA, by *Guido Calza*. Pp. 389, figs. 159, pls. 7. R. Istituto di Archeologia e Storia dell'Arte. Rome, 1940. L. 250.00.

This magnificent volume is one of the most important contributions to Roman archaeology that has come out in many years. The startling discovery of a cemetery along the Via Severiana-Flavia which connects Portus with Ostia was made in 1923, on the occasion of agricultural work done by the Opera Nazionale Combattenti, an organization for the settlement of veterans of the First World War. Calza immediately seized the opportunity to explore the necropolis and published his report on a group of about 15 tombs in *NS*. 1928, pp. 133–175. With indefatigable energy he succeeded in obtaining the permit and financial support to carry on the excavations in 1930. They were completed in one year (see *Capitolium* vi, 1930, pp. 358–364). In a little pamphlet entitled *Il Sepolcreto del Porto di Roma* (*Isola Sacra*), Rome, 1932, pp. 30, 14 figs., Calza gave a preliminary survey of his work which served also as a guidebook.

The manuscript of the present description of the necropolis lay for some years in the Ministero del l'Educazione Nazionale, until in 1938 the decision was made to print it at the moment when the excavations at Ostia reached the climax and Calza, as never before, had his hands full of responsibilities. Furthermore, after the manuscript had been submitted, another remarkable necropolis was uncovered by Calza, this time in Ostia along the Via Laurentina (published by him in *NS*. 1938, pp. 26–74), and Isola Sacra itself had yielded in 1938 another group of 43 tombs. It is admirable how Calza, under such difficult circumstances, mastered a task which seemed impossible: to bring his manuscript up to date, and above all to publish it. In an appendix (pp. 369–378), he gave a comprehensive treatment of the new tombs (which had to be covered with earth again); at the same time he integrated the new findings throughout the whole volume and added the new zone in the most useful general plan of the necropolis, pl. III. The volume appeared in February 1940. If Calza had not worked so speedily, it would never have come out. This holds true all the more for a book so generously equipped with illustrations, plans, cross-sections, photographs and colored plates.

The first chapter (pp. 15–28) deals with the meaning and origin of the name and with the history of Isola Sacra, and with the main artery connecting Portus and Ostia, the Via Severiana-Flavia, which is flanked on both sides by tombs. I agree with Calza when he states on p. 295 that the Via Flavia was called so in the Constantinian period, as it is referred to in an inscription of the fourth century preserved in tomb 16 (see below, p. 216); on p. 27 he seems to be inclined to connect the name with the Flavians of the first century.

But the fact that the road was called in the beginning of the third century Via Severiana makes this hypothesis highly unlikely: why should one in the fourth century have abandoned the name Via Severiana in favor of a denomination derived from a long extinct dynasty? The absence of Constantinian restorations in the discovered track of the road proves nothing.

The second chapter (pp. 29–60) gives chiefly an account of the discovery and of the extent and character of the necropolis. The 200 tombs so far excavated constitute only a small portion of the cemetery (p. 33). While Portus was founded originally by Claudius, no Claudian tomb has been found in the necropolis of Isola Sacra. Calza rightly says (p. 36) that the Claudian cemetery was covered by the new city later created by Trajan. The necropolis of Isola Sacra belongs to this city of Trajan and its development toward Ostia is an impressive documentation of the close bonds which connect Portus with Ostia rather than with Rome (p. 36). The oldest tomb, 64, still belongs to the period of Trajan, as brick stamps prove (pp. 40, 278; Bloch, *Bolli Laterizi*, Rome, 1938, p. 48 = *BullComm.* lxiv, 1936, p. 188). What little chronological evidence can be gathered from the inscriptions is in agreement with this conclusion. There occur a *Ti. Claudius Aug. lib. Eumenes*, who must have been a freedman of Nero (tomb 49, p. 313), and two freedmen of Domitian or another Flavian Emperor: *T. Fl(avius) Aug. lib. Saturninus* (p. 283) and *T. Flav. Aug. lib. Felix* (tomb 90, p. 354). The cemetery was in continuous use from the last years of Trajan up to the middle of the third century; but there are sporadic later burials. Particularly notable is the appearance of burial and cremation in the same period (p. 52) and even in the same tomb, as strikingly proved by the inscription of C. Calpenius Hermes published by Calza in *NS.* 1928, p. 147. The second part of it runs as follows: *cubiculum intrantibus ad dextram et foras in pavimento sarcophagae et contra et laeva parietibus duobus aediculas cum ollis et sarcophagis fecit* (confirmed by the archaeological evidence). The most outstanding tombs belong to the first half and the middle of the second century, the time when Portus and Ostia reached the height of their development.

In the chapter on architecture (pp. 61–96) Calza appropriately starts with a study of the necropolis as a whole. Being a veritable urban complex with real streets, Isola Sacra represents a type of cemetery as characteristic of the Empire in the second century as Cervetri is of the Etruscans and the catacombs of the Christians of Rome in the first centuries of our era (p. 62). By an examination of the style of the tombs of Isola Sacra, he comes to the conclusion that the cell-like tomb, of which those in Isola Sacra are good examples, is the most widely spread and typical grave in the second and third centuries. It is the exact counterpart to the *insula*, the most common type of home in the large cities of the same period, dealt with so competently by Calza himself (esp. *MonAnt.* xxiii, 1915, pp. 541–608 and *Palladio* v, 1941, pp. 1–33; cf. Van Buren, *AJA.* xlv, 1941, p. 456 and in general, A. Boethius, *Roman Architecture, from its Classicistic to its Late Imperial Phase*, Göteborg, 1941).

The pictorial decoration of the tombs (pp. 97–160) is of particular importance, because it greatly increases our knowledge of Roman painting in the post-Pompeian period. For an appreciation of Calza's treatment of these problems see G. M. A. Hanfmann in *CW.* xxxv, 1941, pp. 89–92. Of the paintings of the tombs not published in this volume those in tomb N in the group of 1923 deserve special attention because of their bearing on the history of religion (*NS.* 1928, pp. 152–164). Since the appearance of the present book, the discovery of the *Casa delle Muse* on the Decumanus of Ostia (see Van Buren, *AJA.* xlv, 1941, p. 454; xlvi, 1942, pp. 431–432) with its well preserved paintings has overshadowed all similar monuments so far known in Ostia and Portus. Nevertheless, the paintings of Isola Sacra will retain their full value for reconstructing the history of Roman painting during the second and third centuries. Calza, who was in this and the following two chapters very ably assisted by Mrs. R. De Chirico, has made as much use as possible of comparisons.

Although many pavements have been destroyed, the remaining ones offer enough interesting material (pp. 161–186): mythological subjects alternate with familiar Nile scenes or purely decorative patterns. A mosaic with the crude figure of a Venus covers the tomb erected by a Cocceia Tyche to Sextus Iulius Armenius "*amico bene merenti*" (pp. 174, 177, 331). An equally rough mosaic in tomb 34 belonging to the fourth century contains a portrait which Calza well compares with the portraits in the grandiose pavement of the basilica of Aquileia (p. 176). A highly interesting representation of the Zodiac and the Sea-

sons is interpreted on p. 183 and will receive an exhaustive treatment in Hanfmann's forthcoming book on the Seasons. In front of tomb 34 there is a pavement showing two ships between a lighthouse (pp. 169–170, fig. 83); an inscription is added:

ωΔC ΠΑΥC₁
λυ ποc

and is to be read ὧδε παυσίλυπος; this means "Here end my cares!" (see also G. Stuhlfauth, *RM.* liii, 1938, pp. 157–158, fig. 13, and, especially Rostovtzeff, *AJP.* lxiv, 1943, p. 102). For the idea in the inscription the reviewer refers to the striking analogy in the epitaph, *Carmina Latina Epigraphica* (=*CE*), ed. Bücheler, Leipzig, 1895–1897, vol. ii 1, 225:

Aeterna domus hec est
pausum laboris hic est
aliquid memoriae hoc est

(see for this epitaph A. Brelich, *Aspetti della morte nelle iscrizioni sepolcrali dell'Impero Romano, Dissertationes Pannonicae* i, 7, Budapest, 1937, p. 61 and R. Lattimore, *Themes in Greek and Latin Epitaphs, Illinois Studies in Language and Literature* xxviii, 1–2, Urbana, Ill., 1942, p. 167). The interpretation of the mosaic is clear. The ship, after a stormy journey, at last has reached the port, here characterized by the famous lighthouse of Ostia, the man's native district. The symbol of ships and lighthouse appears also on the left side of a sarcophagus from Isola Sacra (pp. 203–204, fig. 107). On the right side the deceased enjoys life in the after world, drinking in an inn which looks like a replica of the famous osteria in *Via di Diana* in Ostia (Calza, *Ostia*², p. 127, fig. 44). The lighthouse between two ships occurs, rather prosaically, in pavements of the *Piazzale delle Corporazioni* in Ostia as a kind of trademark of some of the corporations. Thus, both the Pausilypos mosaic and the sarcophagus vividly reflect the closeness between real life and life hereafter, which is typical of the petits-bourgeois whose bodies and ashes rest in Isola Sacra. For the ship-symbol on tombs, cf. Campbell Bonner, "The Ship of the Soul on a Group of Grave-Stelae from Terenuthis," *PAPS.* lxxxv, 1941, pp. 84–91, esp. p. 88).

Most of the sculptural findings had been made public by Calza in the preliminary article *NS.* 1931, pp. 510–542. Here he gives (on pp. 187–262) a much more detailed description of these works. A thorough discussion of some of them and of others not treated by Calza is given by G. Ricci in his article "Sculture rinvenute nell'Isola Sacra," *NS.* 1939, pp. 59–78. In the reviewer's opinion, the majority of the statues found in the necropolis were given to the dead in order to surround them with dear and familiar objects of their lifetime. This seems more plausible than to assume that these statues were placed in the tombs at a later date for protection against marauders. It is not improbable that the portrait of C. Volcacius Myropnus (pp. 225–228, figs. 123–124) had a function similar to that of the portraits in the second *columbarium* of *Vigna Codini.* Many of the sculptures of Isola Sacra have become famous in the last ten years: the portrait of Myropnus, the grandiose sarcophagus of the *archigallus*, the charming sarcophagus with representations of children, the "Return from the Market," and, last but not least, the terracotta reliefs which show the inhabitants of the tombs in their professional life (for these reliefs see also Calza, "Arti e mestieri in Ostia Antica," *Capitolium* x, 1936, pp. 413–423). The inscription of the urn of Culcia Metropolis should be read as it is given on pp. 269 and 279: *D. M. Culciae / Metropoli / tympanistriae / M(atris) d(eum) m(agnae) utriusq(ue) / Portus.* The reading on p. 220, repeated by Ricci, *NS.* 1939, p. 64 is *not* correct. In the inscription of the urn discussed on p. 219 (cf. Ricci, *NS.* 1939, p. 62, fig. 4) the reviewer suggests the reading *P. Rustius Sympheros* instead of *Prustius.*

In the chapter on inscriptions (pp. 263–284) Calza deals not only comprehensively with the most interesting inscriptions discovered in the necropolis, but he takes this opportunity also to treat the social consequences to be drawn from the epigraphical evidence. Calza was entitled to be comprehensive because he planned to publish all of the more than 200 inscriptions found in Isola Sacra in a new *Supplementum Ostiense* to the xivth volume of the *CIL.* He has done more than enough by printing—besides the group indicated above—all inscriptions discovered *in situ.* 111 inscriptions, roughly half, by far the more important half of the crop have been incorporated in this volume. Most of the inscriptions found *in situ* are given in the last portion of the book, the description of the tombs (pp. 285–368 and the Appendix, pp. 369–378). As this cemetery was used primarily by middle class and lower middle class people of Portus, we find centurions, *evocati Augusti*, soldiers, priests of Magna Mater and Aesculapius, imperial freedmen, and

all sorts of artisans. In the field of the poor only amphorae mark the burial place without any indication of the name of the deceased. Only about 4% of the inscriptions are in Greek.

Since it was not possible, in the framework of this book, to give an interpretation of every single inscription published, it may be permitted to add comments on some of them.

Particularly interesting is the inscription in tomb 16 (p. 295), which belongs to the fourth century and is written in a kind of vulgar Latin: *D. M. / Publius Cornelius Fortunatus / Terentio Bitalini et Sentiae Laidi /* (added in line 1: *et Sentio Statiano alumno suo*) */ me donavi sarcofaga* XII *in q(u)ibus tria / debet facere suis inpendis cundissero / parte destra Bia Flabia data clabe et do-/nata esse bolo q(u)e supra iscrita sun(t) / et ab erede meu liberti libertabusq(ue)*. While *me donavi sarcofaga* may be explained by analogies like *egone te pro hoc nuntio quid donem?* (Ter., *Hec.* 849) or *Pompeius . . . turmam Sallvitanam donavit . . . cornuculo et patella torque armilla palereis et frumentum duplex* (*CIL.* i², 709; cf. *Thes. Ling. Lat.* v, p. 2009, 71 ff.), the understanding of the word *cundissero* seemed obscure until Professor J. Whatmough suggested to me the following solution: *cundissero* = *cum desero*, meaning "when I depart." The form *dissero* = *desero* needs no special justification; as to the meaning of *desero* = depart (die), the *Thes. Ling. Lat.* v, 1, p. 683, 38 gives the following parallel passage *tu, mihi qui coniunx fueras, deseris* (Val. Flacc. iii, 325). The "Italian" form *iscrita* is also noteworthy.

In the whole necropolis only one *graffito* has been discovered, at the entrance of tomb 42. It consists of two lines, the first being a *versus obscenus*, ending in *puella(m)* (*sic;* the readings on pp. 279 (*puellam*) and 310 (*puella*) have to be corrected accordingly) and reproducing, with a slight variation, the *graffito* in the Bath of Titus *CE.* ii, 1, 1810; the second line—*cuius* (referring to *puella(m)*) *cineres aurea terra tegat*—is known from two epitaphs:

CE. 1308 = *ILS.* 8132: *have Septima, sit tibi terra levis.*

Quisque huic tumulo possuit ardente lucernam, illius cineres aurea terra tegat. (from Salerno)

and Seure, *RA.* v, 3, 1916, pp. 308 and 380:

isque tuas cineres aurea ter[ra teget], from Bulgaria (latest reference, Lattimore, *op. cit.*, pp. 134 and 236).

The cemetery of Isola Sacra gives us the rare opportunity to observe that at one place the names of otherwise obscure persons occur in more than one inscription. P. 282, inscr. l: *Euhodius Caes(aris) n(ostri) ser(vus)* and *Vennonia Apphis "loco empto a Valeria Trophime"* prepared their tomb for themselves and their freedmen, etc. The same lady appears in the same capacity in tomb 94 (p. 360): *D. M. Trophimus Caes(aris) n(ostri) ser(vus) et Claudia Tyche sibi et Claudiae Saturninae filiae pientissimae . . . comparato loco a Valeria Trophime p(er) p(edes) iiii huius monument(i)*, and in the same tomb 94 (p. 361): *D. M. C. Galgestius Helius loco puro empto a Valeria Trophime fecit sibi et suis aediculam iunctam parieti intrantibus parte dextra in qua sunt ollae n(umero) xiiii praeter eam ollam quam donavit Trophime Galgestio Vitali ex quib(us) ol(lam) I Pompon(io) Crysopoli d(ono) d(ed)i.* The little precinct with the minutely described urns is still preserved. It is highly probable that the first of the three inscriptions belonged originally to tomb 94 also, which apparently was owned by Valeria Trophime; she sold various sections of it to at least three parties; two of them were imperial slaves.

P. 280, inscr. f: C. Terentius Lucifer appears as donor to C. Terentius Felix and Ulpia Chrysopolis. The same C. Terentius Lucifer gave *"haec arka virgo sive sarcophaga duo"* to L. Tonneius Caelestinus (p. 282, inscr. n). I do not doubt that both inscriptions come from tomb no. 11 which contains the sarcophagus of Terentius Lucifer himself (p. 288): *D. M. Terentius Lucifer et Terenteae Kallotygeni et filis suis fecit. Si q(u)it (sic!) in aeo (sic!) sarcofago inferet corpus sibe ossa, inferet aerario Saturni s. xxx m(ilia) n(ummum).* (For the gift of sites, cf. A. D. Nock, *CW.* xxxvii, 1943, p. 65, n. 10).

Tomb 29 (p. 303) is the tomb of Verria Zosime and her husband Verrius Euhelpistus: *D. M. Verria Zosime et Verrius Euhelpistus fecerunt sibi et libertis libertabusque posterisque eorum.* The husband apparently was in the business of making and selling tools, scenes of which are represented in the terracotta reliefs flanking the inscription (p. 76, fig. 26; p. 252, figs. 151–152). The cover of their sarcophagus is now in Ostia and should be restored to the tomb; it was published by Ricci, *NS.* 1939, pp. 70–72, figs. 14–15, who did not notice the connection. The sarcophagus bears the following inscription: *Berria Zosime / fecit sibi et / Berrio Euhelpisto / coiugi (sic) suo.* The reliefs of the cover indicate that the sarcophagus

was decorated with scenes from the myth of Meleager and Ricci convincingly suggests that the fragment published by him on p. 73 belonged to the same sarcophagus. It is not without interest to learn that a toolmaker in Portus in the second century chose to have himself buried in a sarcophagus with scenes from the myth of Meleager. The terracotta relief of a grinder (?) (p. 253, fig. 152), found in this same tomb 29, indicates that other members of the family belonged to the same trade. It is characteristic that in the pavement of the present second floor the same machine is represented which is used in fig. 152 (p. 304).

One of the smaller tombs "*a cassone*" (p. 323, no. 62) was erected by P. Betilienus Synecdemus to his friend L. Sittius Crescens. This is the same Betilienus Synecdemus whose tomb is nearby tomb 64, the earliest tomb in the necropolis (see above, p. 214): *Dis Manibus / P. Betilieno Synegdemo / Betiliena Antiochis / coniugi bene merenti / libertis libertabus posterisque / eorum fecit* (p. 325). There is no doubt that from this tomb comes the urn, p. 220, no. 18 (cf. Ricci, *NS.* 1939, p. 65, no. 7, fig. 7): *D. M. Betilieni / Synegdemi et / Betilienae Antiochdi* (*sic*) */ cura / M. Cosconi Hygini.*

In the inscription on p. 353 it is said . . . *donatum sibi pavimentum purum virgin*(*is*) *monumenti huius APERELLA Hieronide.* . . . As the name Aperella does not exist, I suggest to read *a Perelia* or *a Perell*(*i*)*a.*

The modest tomb 98 (p. 366) set to Antonia Tyche by her sons *M. M. M. Antonii Vitalis, Capito, Ianuarius* may be connected with the inscription of M. Antonius Vitalis on p. 281, i.

In tomb 100, p. 367, Scribonia Attice set an inscription to herself, to her husband and mother *et Diocli et suis libertis libertabusque posterisque eorum praeter Panaratum et Prosdocia*(*m*). *H*(*oc*) *m*(*onumentum*) *h*(*eredem*) *e*(*xterum*) *n*(*on*) *s*(*equitur*). This means that the tomb is open to her freedmen and freedwomen with the exception of Panaratus and Prosdocia. Similar inscriptions are known, e. g., *ILS.* 8284 (Puteoli): . . . *et sibi et suis libertis libertabusque posterisque eorum praeter Phlegusam libertam ne ei in hoc monumento aditus detur;* cf. also *ILS.* 8115 and 8285.

In general, it seems to me a promising task to try to restore to the tombs inscriptions which were found not *in situ*. This would be possible since in a number of cases frameworks of plaques are preserved and can be measured.

Among the tombs discovered in 1938 and treated by Calza in the appendix, no. 107 deserves special mention. It yielded, besides the statue of Iulia Procula (pp. 222–223, figs. 121–122), some heads and the statue of a child (p. 234, fig. 132), and 9 inscriptions, 5 of which have been published by Calza, pp. 374–375. He also deals with the relationship of the persons buried here. A monumental inscription decorated the entry of the tomb, the bronze letters of which have fallen out:

(1)
Ἰουλία Πρ[όκλα
Τ. Μουνατίω Πρ[όκλω (*sic!*)
Μουνατία Ἐ[λπίς
Κ. Μάρκιος Δη[μ . . . .
ἀρχιατρός

Inside the tomb two inscriptions refer to T. Munatius Proclus, the second person mentioned in the common inscription:

(2) *D. M. T. Munatio T. f. Proclo Quir*(*ina*) *Iuliano fec*(*it*) *Iulia Ti. f. Procla, vix. ann. vi die. xiii.*

(3) on the small sarcophagus of a child: (unpublished) *T. Munat*(*io*) *T. f. T. f. Proclo.* It seems obvious that his mother Iulia Procula first buried her child in this tomb; see inscription (1). She must have been married to a T. Munatius. . . . It is noteworthy that her son has not only his first *cognomen* Proclus from her, but also the second *cognomen* Iulianus is formed from her *nomen gentile.* Probably soon she followed her child. Her statue, in the attitude of the Hygeia Hope (see above), was found *in situ* on the basis which bears the inscription

(4) *Iuliae Ti. f. Proculae.* More information about her we find on her urn:

(5) *Iuliae Ti. f. Proculae vixit ann. xxix mens. xi Munatia Helpis mater fil. piissimae fec*(*it*). According to this document, Iulia Procula died at the age of 29 years; she was the daughter of Munatia Helpis who appears in inscription (1). Her father must have been a Ti. Iulius (Proculus?). On a basis similar to that of Procula an inscription has preserved the name of her sister:

(6) *Iuliae Ti. f. Nymphidiae.*

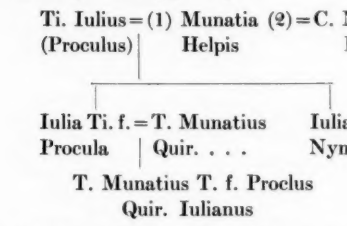
The only figure whom we have not yet identified is the C. Marcius Dem . . . of the first inscription. The most likely assumption seems to me that he was Munatia Helpis' second husband. Iulia Procula's husband, whose name does not occur among the inscriptions hitherto discovered, was a Munatius; this means that Procula married a member of her mother's family.

Three unpublished inscriptions found in the same tomb belong to the same families:

(7) *D. M. / M. Munatio Liciniano / et Curtiae Gemelle que et / Flavia parentibus piissimis / fecit / M. Munatius Marcianus / filius.* Here the Munatii and the Marcii are represented.

(8) Urn: *D. M. / Iulia Phronime / fecit coniugi suo / bene merenti.* Iulia Phronime may be another sister of Procula.

(9) Altar: *D. M. / T. Liburcius / Marinus pa/ter fecit T. Li/burcio Marcio / Marino fil. / optim. q(ui) v(ixit) an. / xxvi m. ii d. xxiii.* Once more the name Marcius appears. Graphically, the stemma of the family can be reconstructed as follows (cf. Calza, p. 375):



At last a suggestion: the statue of a child found in this tomb which is contemporary with that of Iulia Procula (see above, p. 217) may well be a representation of the *genius* of Procula's little son T. Munatius Proclus.

As the careful work of conservation and restoration, in which Calza enjoyed the competent advice and help of Arch. Italo Gismondi and assistant Sestilio Della Nave, has made the cemetery of Isola Sacra one of the most attractive sites in the environment of Rome, so this book appeals not only to the specialized scholar for whom it will naturally be an indispensable companion, but it will easily win friends among all those interested in Roman art and history. To my knowledge, there are at present only two copies of this work in the United States and it is to be hoped that more copies will be made available to the public after the War.

Not one of the least merits of this book is the human warmth which pervades it, beginning even with the dedication: *Ai genitori, ai parenti, agli amici cari che la morte ha tolto alla mia vita d.* It is Calza's *humanitas* which urges him to say that the impression one receives in this cemetery is more spiritual than cultural, that nowhere else has he ever felt so pure and consoling the thought of the transition from Life to Death. Anyone who, like this reviewer, has had the privilege of working with Calza, knows the kindness and generosity with which he allowed his countrymen and foreigners to make use of the treasures which he had unearthed in Ostia. In his first detailed report on Isola Sacra in 1928, he concluded his treatment of the paintings of tomb L with the hope that other people might draw from them new material for discussion; he himself was concerned only with emphasizing the existence of these paintings and their importance. In the same way the volume on Isola Sacra will, besides offering so much that is new, exercise a stimulating influence on scholarship for a long time to come.

HARVARD UNIVERSITY HERBERT BLOCH

THE ABBEY OF ST.-DENIS, 475-1122, volume I, by *Sumner McKnight Crosby.* (Yale Historical Publications, History of Art III.) Pp. XVI + 211, ills. 92. New Haven, Yale University Press, 1942. $7.00.

Both because of the importance of the subject and because of the outstanding quality of the presentation, Mr. Crosby's volume should have been reviewed a long time ago. This reviewer more than anyone else regrets that unavoidable circumstances have delayed him in having the pleasure of announcing the book long ago.

The present volume is the first of two. It deals with the history of the Abbey Church of St.-Denis until 1122, that is up to the time when Suger, who started the present church, became Abbot. The author thus limits himself in this first volume to several questions, all equally important: he strives to establish the date of the foundation of the convent, and that of the first church on the present site, two entirely different questions, as he rightly points out; he describes the excavation which he undertook to locate the remnants of the church which preceded the present one; and, based on these findings, on previous evidence and on comparison with other contemporaneous structures, he attempts to reconstruct this church and the additions made before 1122.

In the first five chapters the author deals exclusively with problems of topography and of historical sources. The result of his detailed and thorough studies corroborates the main points of Havet's and Levillain's theses: from the late fifth to the mid-eighth century, Saint Denis and his fellow martyrs were buried at St.-Denis l'Estrée; only then were their relics transferred

to the present site, where a new church was erected, under the direction of Abbot Fulrad and with the support of King Pepin the Short. Only the date of its dedication, 775, is definitely established, since Crosby, in accordance with Buchner, accepts the year 754 only as a *terminus post quem*, not as a *terminus ad quem* for the construction. For all practical ends it remains certain that this new church was laid out in the third quarter of the eighth century. It is this eighth-century church, not a legendary seventh-century building by Dagobert, which Viollet-le-Duc first uncovered (but misdated) a century ago. This eighth-century structure, a milestone in the history of Carolingian architecture, and the chapel which Hilduin added in 832, form the subject of Crosby's volume.

The disposition of the seventh-century church is established in its general lines by Crosby from his own excavations, from the findings of Viollet-le-Duc, published in his *Dictionnaire*, and from older plans. The presentation of all this evidence in the form of careful descriptions makes the core of Crosby's book. The general shape of the old church, a basilica with a short nave and with two aisles, with a long transept and with a single apse, had been outlined by Viollet-le-Duc, but a great number of points in this picture still remained doubtful. Crosby's excavations, though limited in area owing to unforeseen difficulties, definitely clarify two of these points: they establish the existence of the apse within the area of the present twelfth- and nineteenth-century crypt, in exactly the spot indicated by Viollet-le-Duc—but different in shape. Its foundation wall forms an irregular polygon on the outside and a semicircle on the inside. Added to these findings through excavations is the discovery in old plans of the traces of an annular crypt underneath the apse. At the western entrance of the basilica Crosby uncovered the foundations of the Carolingian porch, somewhat behind the present two tower façade, thus clearly delimiting the length of the Carolingian structure and indicating the main traits of the solution of the façade by some kind of a tower arrangement. Other results follow from a careful analysis of Viollet-le-Duc's reports and of other sources, although, as Crosby points out, these results may be slightly altered by future excavations. But it seems likely that the transept had the shape indicated by Viollet-le-Duc, long and narrow, without a segregated crossing and with only one apse; in short, that it was of the "continuous Roman Early Christian" type; that the nave was accompanied by two aisles, and that the arcades rested on columns; that the whole plan was based on a scheme which consistently used the Carolingian foot; and that, to sum up, the building showed a number of features which link it to the revival of the Early Christian basilica in the Carolingian period.

The description of the remnants as found in the excavations, of the older plans and drawings, and in short of all the source material available is done with exemplary thoroughness and carefulness. One has the feeling of standing on solid ground. Likewise in assembling and interrelating all these data with the end of basing a reconstruction upon them the author has taken utmost care to discuss the greatest number of possible solutions and to arrive finally at the most plausible one, by elimination and by careful comparison with the known examples of Carolingian architecture.

In this way the reconstruction of the church as proposed by Crosby is no doubt correct in its general lines. Reconstructions are, however, by definition based both on data and on interpretation, and within this interpretation a number of factors are intermingled: our admittedly limited knowledge of both the technical and the stylistic range of a given period; our concept of the position of this period in the general development of the history of art; and last, but not least, our time-bound visual imagination, which to the largest extent determines the reconstruction. As a result, full agreement on any reconstruction will be difficult, even when all the data are presented with the most admirable thoroughness and care and with the greatest knowledge of the given period. Consequently, there are a few points on which the possibility of a different reconstruction of the Carolingian basilica of St.-Denis has suggested itself to this reviewer. Mostly minor, they concern details regarding the outline of the apse, the number of arcades in the nave and the shape of the tower over the transept. The only major difference of opinion is with reference to the design of the west façade of the Carolingian church.

The apse, according to Crosby, was polygonal on the outside, as contrasted with a semicircular interior. However, what was actually found in the crypt was only the *foundations* of the apse and it seems not impossible that a semicircular wall rose on these foundations.

As to the nave arcades, Crosby's cautious

weighing of the evidence leaves, of course, no doubt whatever that the supports were columns, and, one may add, marble columns at that, as proved by Suger's search for "*columnas marmoreas aut marmori aequipollentes*" to match the Carolingian supports. Also the height of these columns is well established. (The capitals at the Cluny Museum which come from St.-Denis, did not, according to Crosby, belong to Fulrad's church). As regards the width and the number of the arcades that rested on these columns, one wonders whether they really were spaced at a "normal Carolingian distance" of 4.10 m., thus resulting in the number of ten arches and nine columns per arcade. Crosby himself seems to have been doubtful at one stage, since he gives one sketch with only nine arches and eight supports.

The tower over the transept was, according to Crosby, a square, possibly wooden structure. Since, however, the author rightly reconstructs the transept without a segregated crossing, he has some difficulty in allowing at this point for a square tower which would seem to have required four supporting arches—even assuming that the tower was wooden. It seems to this reviewer that a round tower over the transept would be a more likely solution, as at Centula and evidently at Cologne cathedral, in the eighth and ninth centuries respectively. At present, I cannot recall any square transept tower, either in wood or stone, in Carolingian architecture.

The reconstruction of the west façade may bear a more thorough discussion. The data are: first, Suger's description of the old church as he saw it in 1122 and, second, the remnants of the eighth-century structure as excavated by Crosby. Suger's description of the porch is well known: ". . . *in anteriori parte ab aquilone principali ingressu principalium valvarum, porticus artus hinc et inde gemellis nec altis, nec aptis multum, sed minantibus ruinam turribus angebatur.* . . ." The passage is hard to interpret, especially the term "*ab aquilone*" for which I have no explanation of my own to propose. But it seems clear that Suger saw a narrow entrance building flanked by low tower-like structures. (Of course this whole arrangement was four hundred years old in Suger's time and the original Carolingian design had possibly undergone one or more alterations). The results of the excavations seem at first glance to correspond to this description; Crosby found the southern half of the foundations of an entrance structure to the west of the nave, evidently divided into three parts, two square bays on the sides and a rectangular one in the center. In consequence, he reconstructs the façade with twin towers, flanking a closed portico which was possibly preceded by a small porch. In front of this structure he proposes, as a mere hypothesis, the existence of an atrium. Thus, in Crosby's model, the western structure with its two towers counterbalances the transept with its square tower in a beautiful and regular design, very much as in a Romanesque church of the eleventh or twelfth century.

There are, however, a few points which in this reviewer's opinion do not quite tally with this reconstruction; the remnants of the entrance structure as shown in Crosby's plans seem to prove that the front wall of the center bay was stronger, and projected beyond the walls of the two flanking bays. This would lead one to assume that the wall in the center bay had to carry a rather heavy and in consequence, tall, structure, taller indeed than the structures that rose on the weaker walls of the flanking bays. Also, the fact that the wall of the center part projects beyond the flanking bays would seem to exclude the reconstruction of a porch in the center between two towers. Such a plain porticus would rather have receded, or would simply have spanned the distance between the lateral towers. The relative strength of the walls as found by Crosby would seem to suggest an arrangement consisting of a central structure dominating and slightly projecting over the rectangular main bay and flanked by equally high or possibly by somewhat lower towers on either side.

Such a solution would in this reviewer's opinion not be contradicted by Suger's description. Suger merely says the two towers were low, but does not give his *tertium comparationis*. That he mentions the center part only as a narrow porticus can be easily explained, since his attention would be drawn to the flanking *turres* if the center part were covered by a lean-to roof and the towers by peaked roofs. Also, it is possible that the center structure had been lowered at some time between the eighth and the twelfth century. Moreover, this solution would fit well into what little we know of Carolingian architecture. While twin tower façades, to my knowledge, have never been proved to exist between the fifth and sixth centuries, when they abound in Syria, and the middle of the ninth century, when such a type makes its appearance at St.-Germain at Auxerre, façade solutions with a projecting center structure and

side towers are quite frequent in the Carolingian period. Einhard's church at Steinbach is a good example. This reviewer is, of course, aware of the fact that twin tower solutions have been proposed not infrequently for Carolingian churches (witness Effmann's reconstruction of the second church at Werden, to which also Crosby refers, or Vonderau's reconstruction of the abbey church at Hersfeld), but he is inclined to share the differing views of Reinhardt and Fels. These Swiss archaeologists have suggested that none of the reconstructions hold and that the "*église-porche*" and related pre-Romanesque patterns represent the truly Carolingian type of west façade, based on a dominating center structure and flanking towers. The twin tower façade would have gradually evolved from this type during the later ninth and tenth centuries: as in the case of the segregated crossing or the square crossing, the two-tower façade is, in this reviewer's opinion, fundamentally a Romanesque solution. Cluny, not the Carolingian structures, stands, according to this view, at the beginning of Romanesque architecture.

Crosby's volume no doubt will form a milestone in the history of the exploration of mediaeval architecture. It combines precision and thoroughness with an admirable descriptive technique and with a wide range of general knowledge in the field of mediaeval archaeology. The results of the excavations and the evidence contained in the documentary sources have been integrated in an exemplary way, thus combining the methods of both the historian and the archaeologist. The evidence is presented in masterly fashion and any small differences of opinion as to the interpretation of this evidence mean little in comparison with this achievement. All points of importance are carefully and lavishly documented with plans, photographs and quotations from original sources. Crosby is to be heartily congratulated upon this first volume. This reviewer would like to express the hope that not too many years may elapse before the second volume can appear.

VASSAR COLLEGE RICHARD KRAUTHEIMER

MEDIEVAL AMERICAN ART, by *Pál Kelemen*. Vol. 1. Pp. xiv + 414; Vol. 2. Pp. 1-33, pls. 1-306. New York, The Macmillan Co., 1943. $22.50.

The second volume of this monumental work consists of some 960 photographs, a catalogue of these illustrations, a register locating the pieces shown, and an end-paper map. The first volume is all text. The illustrations are arranged to fit this text or, one may say, the text is built on the logically arranged illustrations. The full table of contents for the text is given below.

The selection of material is on the basis of esthetic value, hence differs from what might be the most useful to an archaeologist seeking to reconstruct particular American cultures as wholes. As an art historian, Kelemen's purpose is "to evaluate the production of these cultures in the light of esthetics, setting it among the arts of the rest of the world." Art and science are considered to be distinct. "A broad new world of human expression cannot be opened by a 'proliferation of minutiae'; the approach has to be through the emotional — the one common denominator of man's grasp at art." The author, though writing beautifully in English, is a native of Budapest. His experience and training, until 1932, was in Europe, and in the field of Old World art. This experience would seem a prerequisite for a balanced view of American Indian art, if it is to be seen in a setting of the art of the world as a whole. It does not of itself guarantee, I think, the most fruitful approach to the American objects. Hence, it may be that readers of this JOURNAL, for the most part scholars and others with a scientific bent, will want to know whether the author — in his avowedly intuitive approach — "kept his feet on the ground" from their point of view. The answer is an emphatic *yes*, and to my mind he is to be more than merely congratulated on a magnificent job. He is to be thanked, for it was an enormous amount of work. If art and science are separate, he did not conclude that as an art historian he could afford to be ignorant of the findings of science, or that the general reader should be asked to follow him without reference to those findings. He very evidently does not think that a work of art can be torn from its cultural context and then fully appreciated.

Accordingly, Chapter XII is really an appendix devoted to the proposition that American Indian art, up to the time of the conquest, developed independently, without significant influence from the Old World. Chapter I undertakes to explain why it has been difficult for people of Western culture to appreciate fully the Pre-Columbian American things; and we are reminded of the various roots and complex development in our own art history. Chapter II provides a series of short sketches of the regional cultures which

produced the art under consideration. The other chapters consist mainly of descriptions and evaluations of each piece illustrated, usually introduced by some general discussion appropriate to the category with which the particular chapter is concerned. A foreword, on which I have already drawn, gives some account of the author's own training and interests, so that any bias can be discounted. He consciously tries to avoid "professional" terminology and clearly wants to be understood by all intelligent readers.

The condensed accounts of Pre-Columbian American cultures seem to me extremely successful, sound, and very much of an achievement. A great deal of research lies behind them, and advice from certain specialists who read the manuscript is acknowledged. Where choices had to be made between conflicting authorities, they seem sound. In particular, the various complex or "high" cultures of Middle America are considered as roughly contemporaneous — the long-current idea that they all stemmed from the Maya is avoided. Latest results and opinions, often in short and relatively obscure publications, are utilized.

Perhaps the reader should have been told clearly that the reconstruction of the ancient cultures is still going on, and that the time of universal agreement on all important points is not yet. In the all-important matter of chronology in Middle America, one ought to know that the two systems of correlating Maya and Christian dates which are mentioned may both be wrong — and that 260 years does not cover the range of differences for all systems still under consideration.

The author claims that his new term "Medieval American" means something less than "Pre-Columbian." The art considered was produced up to the conquest, but not after, and apparently extends back in time as far as the esthetic quality of the known products seemed to warrant. This early limit is supposed to be about the time of Christ. The term "Mediaeval," which in European contexts we might read "Middle," must not be confused with "Middle Cultures." The last term has been used by Vaillant and others to supplant "Archaic," and refers to cultures which produced little "art." Another new term, "Interlying Area," covers the geographical area between the Maya of Middle America and Andean cultures in South America.

The work is so important and wide in scope that I think the full table of contents, for the text, should be given here. I have added a little tabular analysis of the amounts of space. The chapters (Roman Numerals) are: I. Art-History and Medieval American Art; II. Historical Approach; III. Architecture; IV. Sculpture; V. Pottery; VI. Weaving; VII. Metal Work; VIII. Jade and Other Precious Stones; IX. Murals and Manuscripts; X. Miscellaneous Applied Arts; XI. Facets of Daily Life; XII. Evolution or Influence. These numbered chapters are followed by a Chronological Chart, a Bibliography, and an Index.

	III	IV	V	VI	VII	VIII	IX
Mound Builders...					1		
Southwest.....	5	9	9	3			2
Mexican Area.....	22	11	11				
				1*	11*	23*	14*
Mayan Area.....	36	28	19				
Interlying Area....	1	3	7		17		
Andean Area.....	16	4	13	16	12	2	1

* Maya and Mexican areas combined.

The figures in the table give approximate numbers of pages devoted specifically to the area named at the left, in the chapter numbered at the top. Chapters X and XI both cover a variety of things, without formal areal subheadings, and account for 38 pages of text.

The author found much more to say about the Middle American areas than the Andean, and more space is devoted to Maya than to Mexican things. The proportions of attention are of course partly controlled by what has been made available. Mr. Kelemen says: "The production of each area is given space according to its artistic importance, proportionate, as I see it, to the general picture."

Essentially the prime objective has been, I think, proper selection of material, and then exposition. Here and there in the descriptions and esthetic evaluations there appear what might be taken for scientific conclusions. Expositions of involved reasoning have no proper place here, and where no authority is cited, it is taken for granted that these will be accepted as mere opinions. As such, they may have value in suggesting problems for specialists. An example concerns a complex of almond-shaped eyes, aquiline nose and half-open mouth in Maya sculpture. Wherever found, this seems to be attributed to influence from a particular Maya site, Copan (p. 136). Granting the connection between two sites showing this group of traits, the direction of the influence, from or to Copan, has still to be established.

The bibliography distributes about 450 titles among about 270 authors. One supposes the "general reader," for whom the book is designed, would greatly appreciate some mark distinguishing the titles included especially for his sake. For the specialist, certain of the titles are numbered, and cited by this number in the text. Thus citations are to title only, and not to page. This will tend to discourage constructive criticism of "background" parts of the text. Two or three inconsequential errors of fact were spotted, respecting pieces this reviewer happened to know at first hand. These are the most serious faults I have been able to find in a tremendous and remarkably well done job. Another reviewer was frustrated in an attempt to find even a single misprint.

The volumes are handsomely produced. The collection of photographs is not merely very large and well chosen. Most are very fine, the lightings and backgrounds being especially arranged to meet the special ideas of the author. He traveled to the areas concerned, and to Europe, to make this collection, and it is a monument in itself. In obtaining the best possible negatives, and otherwise, he acknowledges the special help of his wife, Elizabeth Kelemen. Previously unpublished objects are included. Intended for wide distribution, which will benefit all concerned with ancient America, the book is of course copyrighted.

LINTON SATTERTHWAITE, JR.
UNIVERSITY MUSEUM,
PHILADELPHIA

ARKHEOLOGICHESKIE ISSLEDOVANIIA V, RSFSR 1934–1936 gg. KRATKIE OTCHETY I SVEDENIIA: (Archaeological Research in the Russian Soviet Federative Socialist Republic in 1934–1936: Brief Reports and Information), Edited by *V. V. Golmsten*. Pp. 327. Moscow and Leningrad: Academy of Sciences, N.Ia.Marr Institute of the History of Material Culture, 1941.

CONTRIBUTION À L'HISTOIRE DES TRIBUS DE LA HAUTE VOLGA AU I MILLENAIRE, by *P. N. Tretiakov*. Materiaux et Recherches d'Archéolgie de L'URSS, No. 5. Pp. 150. Moscow and Leningrad: Academy of Sciences, N.Ia.Marr Institute of the History of Material Culture, 1941.

These two publications (both in Russian, but the second with a parallel title and a brief résumé in French) are worthy representatives of the important work done by Soviet archaeologists in recent years. Archaeological research in Russia, far from being interrupted even in the first tumultuous years of the Russian Revolution, has been conducted since methodically and on a steadily widening range. In the early years of the Soviet regime the so-called Academy of the History of Material Culture was organized, of which the late N.Ia.Marr was one of the chief sponsors. It was subsequently merged with the Academy of Sciences of U.S.S.R. and is now known as the N.Ia.Marr Institute of the History of Material Culture. Both publications here reviewed have been published under the auspices of this Institute. The latter is, however, not the only center of archaeological research in the Soviet Union. Each of the republican Academies of Sciences, such as the Ukrainian, the Byelo-Russian (White Russian), the Georgian, and others, has its own archaeological branch. The State Historical Museum of Moscow as well as some of the local archaeological museums likewise have to their credit considerable contributions in the field of archaeological exploration. There seems to be enough coöperation between the archaeologists and the general administration to permit the former to avail themselves of the opportunity presented by some huge governmental construction projects, especially the building of canals, such as the White Sea-Baltic Canal and the Moscow-Volga Canal, built in 1931–33 and 1934–37 respectively. On one hand, large-scale excavations conducted by the government in connection with its projects made in many cases the task of archaeological exploration much easier, and on the other hand, in many localities the archaeologists were faced with the necessity of recording materials and studying ancient sites before they should be submerged at the completion of the canals and locks.

The survey of the archaeological research in 1934–1936 edited by Golmsten covers the territory of the Russian Soviet Federative Socialist Republics which is the largest of the Soviet Republics and represents the bulk of the Union, including such important archaeological areas as the Crimea and the North Caucasian as well as Siberia and Kazakhstan, the latter being, in the period covered by the reports, an autonomous part of the RSFSR, but now a full fledged member of the Union. The survey appeared in 1941, and in some cases and in regard to some localities the results of the excavations conducted in 1934–1936 had been already published in *Sovietskaia Arkheologiia*

and other Soviet reviews, or as monographs. In such cases reference is made in the book to the publication in question and the respective data are but briefly mentioned. When the results of the excavations had not been previously published, condensed reports illustrated with drawings, photographs and map diagrams are presented to the reader. Most of these reports deal with research in the field of prehistory. New data on a number of both palaeolithic and neolithic sites, as well as on bronze and iron age sites have been produced. However, materials bearing both on classical and on mediaeval archaeology have not been neglected either. It obviously would be impossible to survey here the contents of the volume in any detail, and only a few outstanding points may be commented upon.

Considerable work has been done in the region of the upper Volga by P. N. Tretiakov (to whose monograph we shall return presently) O. N. Bader, and a number of other scholars. In the palaeolithic field, P. P. Efimenko continued the excavations at Kostenki, Voronezh province, with the result that the exploration of the south-eastern part of the settlement has been completed and the nature of the dwellings and the storage pits made much clearer (pp. 154–156). Several new epipalaeolithic cave sites have been discovered in the Crimea and assigned to the Tardenoisian and Azilian cultural types (pp. 255–257). In the North Caucasian area, more sites of bronze culture of the second millennium B.C. have been explored, by A. A. Iessen, in the area of the Kabardo-Balkar Autonomous Soviet Republic (pp. 220–228). Important materials have been added to our knowledge of the Iranian (Scytho-Sarmatian) era both in the Crimea and the North Caucasian area. Excavations at the Elizavetino site, Kuban area, conducted by V. A. Gorodtsov in 1935–1936, resulted in the discovery of the remnants of a settlement protected by walls and connected by a canal with the Kuban River. It is thought to be the site of the town of Gargaza, mentioned by Diodorus of Sicily. In the Kerch peninsula at the site of Myrmecium three wineries with full equipment were unearthed; they are assigned to the Hellenistic and Roman period. At the site of Tyritace were found remnants of a number of fishery establishments, including 36 tanks for the salting of fish. Scattered data on Sarmatian civilization have been obtained in the Stalingrad and Rostov areas, as well as in the Northern Caucasus and the Altai region (pp. 172, 182, 186, 202, 204, 214, 217, 218, 228–233, 236, 240, 244, 268–274, 298). When put together they constitute a welcome addition to the materials already known to us. Excavations in Siberia and Kazakhstan brought to light some new elements of the neolithic and bronze age civilizations which flourished there from around 2000 to 500 B.C., such as the Afanasieva, the Andronovo and the Karasuk cultures. To sum up, this survey of archaeological research in Russia is of considerable value for students of various branches of archaeology. Unfortunately, the book has no index, which is rather annoying.

The same is equally true of Tretiakov's book, to which we now turn our attention. His is a fascinating study and, in a sense, a pioneer's enterprise, since our previous knowledge of the archaeology of the upper Volga River in the centuries just before and after the beginning of the Christian era has been scant and not systematized. Some spade work had been done by the late A. A. Spitsyn and, for the adjacent Oka region, by P. P. Efimenko, V. A. Gorodtsov and some other scholars, but on the whole the attention of Russian, as well as of Finnish archaeologists including A. M. Tallgren, turned for this period chiefly to the antiquities of the middle Volga and Kama region. Most of the sites, now described by Tretiakov, were unknown. The opportunity of excavating them arose in connection with the building of the Moscow-Volga Canal, as explained above. Tretiakov starts with a survey of archaeological materials on the upper Volga region bearing on the first millennium B.C. (Chapter I). He then examines the conditions of life of the upper Volga tribes in the early part of the first millennium A.D. (Ch. II); describes the Sonokhta settlement of the fourth and fifth centuries A.D. (Ch. III); outlines the fundamentals of the upper Volga civilization in the middle and the later part of the first millennium A.D. (Ch. IV); and conveys some data on the people living in the region of Lake Nero and Lake Pleshcheevo in the Iaroslavl and Suzdal regions respectively (Ch. V). In the Appendix we find a description of eight upper Volga sites. In each of the general chapters Tretiakov studies the topography of the main sites and describes the contents of the finds with much accuracy and precision. In dating his materials Tretiakov relies chiefly on the types and the patterns of ceramics; also on parallels with the grave contents of the Oka, middle Volga, and

Kama basins; and on objects presumably imported from South Russia. It should be noted here that parallels with the finds of the Kama basin are not always safe, since there is a considerable discrepancy between the dates arrived at for the Piany Bor and other Kama basin necropolises by Spitsyn on the one hand and Tallgren on the other. It seems that Tretiakov accepts Spitsyn's chronology, and, incidentally, while citing some of Tallgren's works, he ignores others equally important. For example, Tallgren's *L'Orient et l'Occident dans l'âge du fer finno-ougrien*, 1924, is not even mentioned in Tretiakov's book.

All said, Tretiakov's classification of pottery, as well as his chronology of the types of ceramics, seems basically sound from the reviewer's point of view. Out of special problems dealt with by Tretiakov in his book, that of iron trade and the forging of iron is of special interest. Tretiakov comes to the conclusion that iron was forged in northern Russia out of swamp deposits, since at least the end of the first millennium B.C. In some of the sites assigned to the beginning of the first millennium A.D. traces of iron forges have been found, and in those of the middle of the same millennium, remnants of more elaborate iron plants including some tools and stores. In regard to religious beliefs, the existence of a "House of the Dead" at the Sonokhta settlement and of similar "Houses" elsewhere should be noticed. In these buildings ashes of the cremated corpses were stored.

On the basis of a careful study of the finds, Tretiakov has attempted to outline the main trends in the social and economic history of the tribes of the upper Volga region in the course of the first millennium A.D. He points out that while in the earlier periods most of the settlements were strongly fortified, after the fourth century A.D. no traces of walls were found on the sites. In order to explain this fact, Tretiakov suggests that the population had originally been divided into small clan groups waging constant wars against each other but that by the fourth century tribal unions had been formed which made life more stable and secure. The economic development of the country was based upon four pillars—hunting; fishing; primitive agriculture and cattle breeding; and primitive industry. Trade did not play any important role until the middle of the millennium. Around the seventh century A.D. an important reform occurred in agriculture: permanent and better cultivated fields replaced temporary and poorly tilled clearings in the forests. In connection with this the horse, which before that date had been kept as cattle, chiefly for meat, now became an important element in agricultural husbandry.

Throughout his book Tretiakov prepares the reader for a solution of the problem of the ethnic composition of the population of the upper Volga region. Thus, already in Ch. II he remarks, somewhat casually, that the type of pottery found at Gorodok and referred to the beginning of the first millennium A.D. is similar to Slavic ceramics of the ninth and tenth centuries A.D. In Ch. IV Tretiakov, discussing the funeral rites, observes that the "Houses of the Dead" were in time replaced by oblong kurgans, typical of the Krivichians, a north Slavic tribe. On the basis of these and other considerations, he comes to the conclusion that the prehistoric inhabitants of the upper Volga region were the ancestors of the Krivichians. This seems plausible, but the problem cannot be considered definitely solved.

YALE UNIVERSITY

GEORGE VERNADSKY

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PLATE III.—BOSTON 98.916. OBVERSE

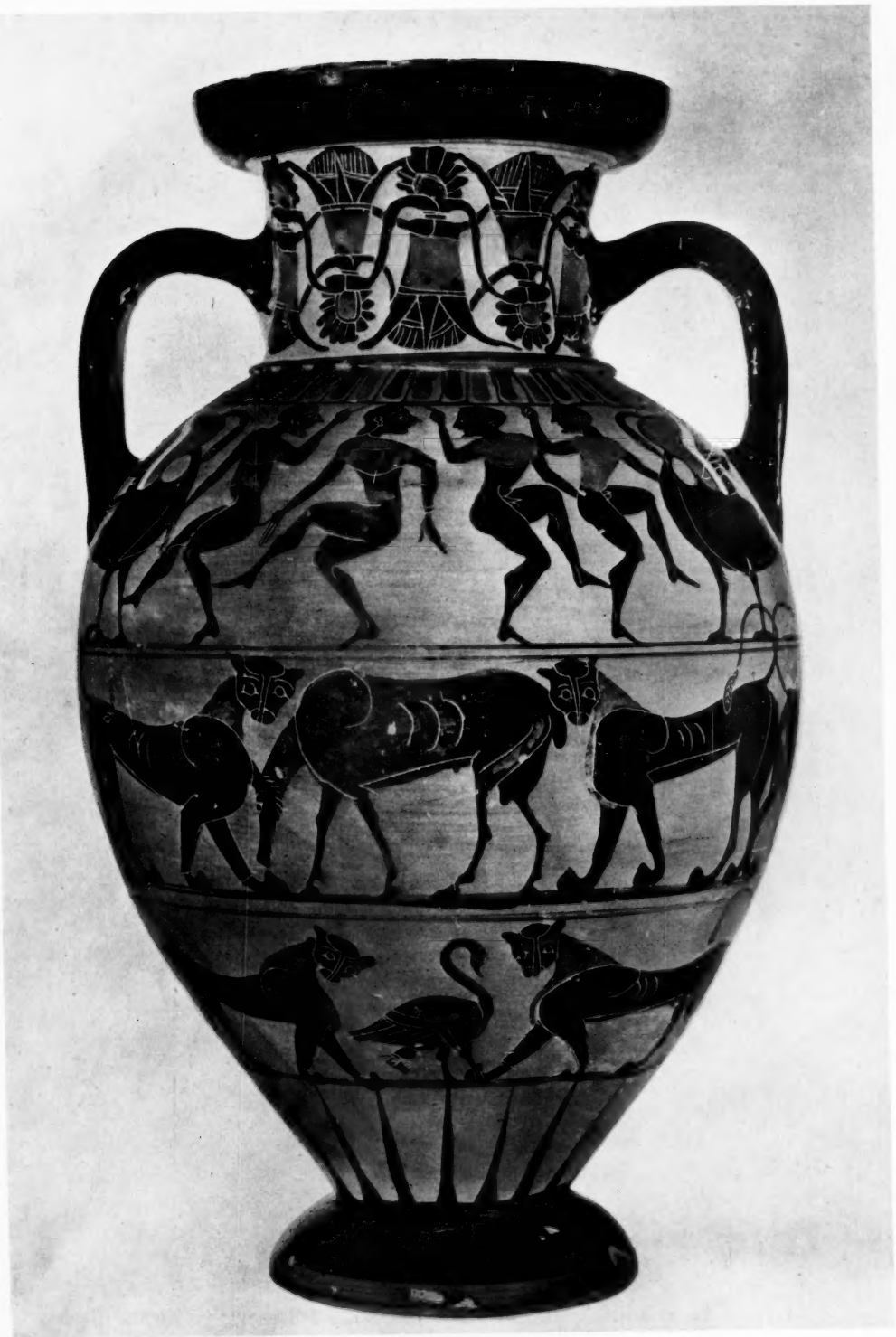

PLATE IV.—BOSTON 98.916. REVERSE

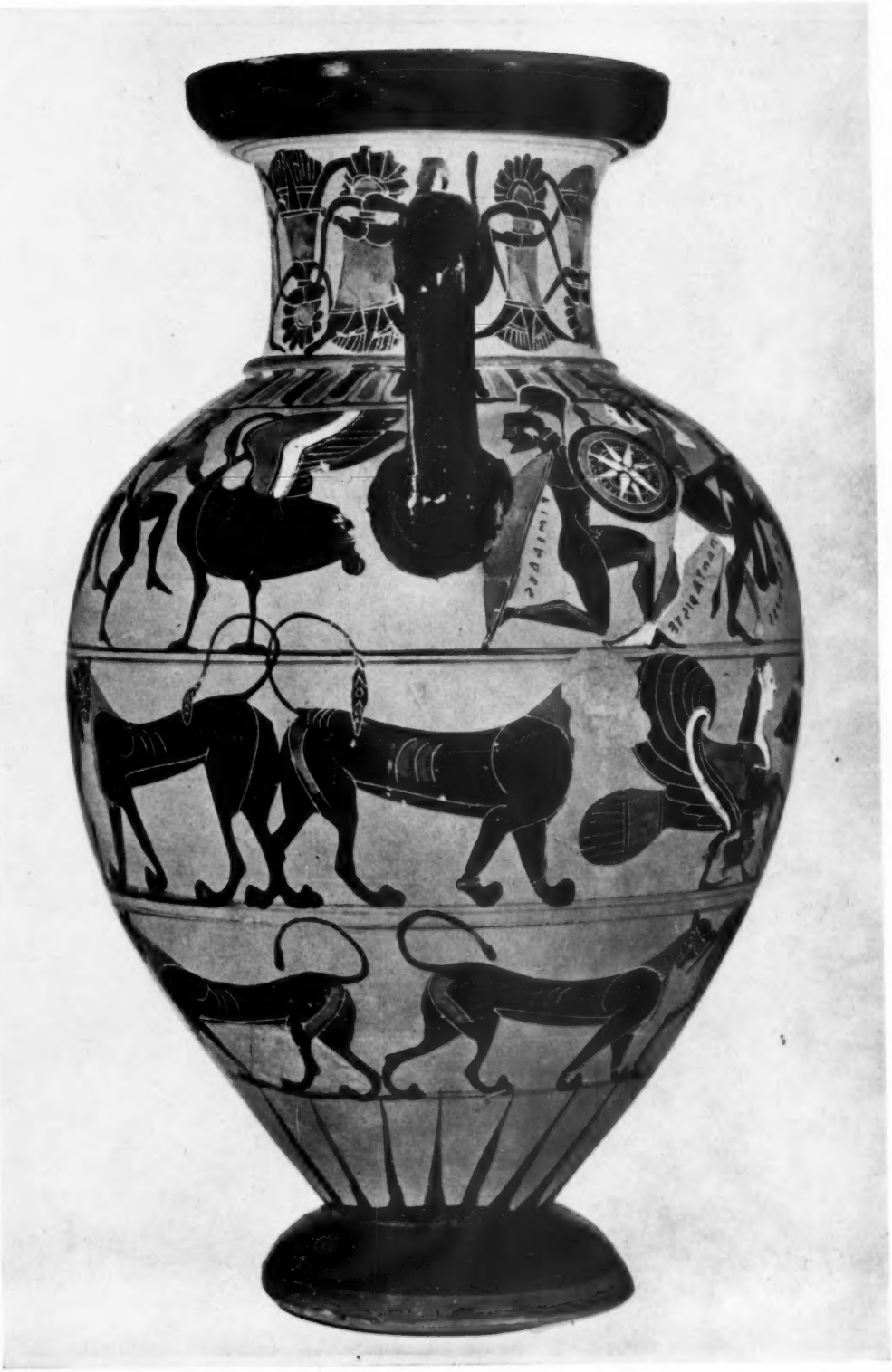

PLATE V.—98.916. SIDE VIEW